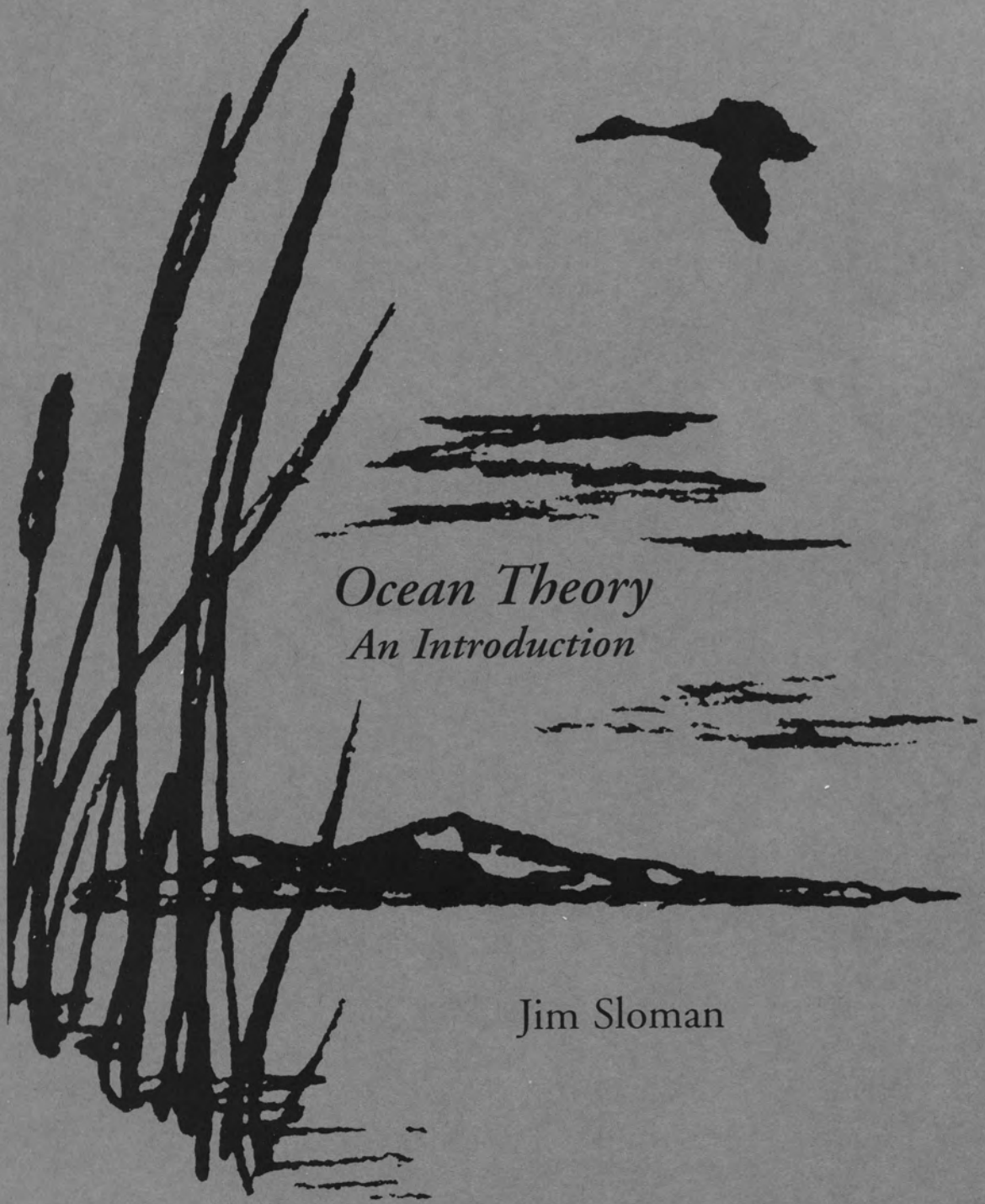


Ocean Theory

An Introduction

Jim Sloman

"I am absolutely astounded and excited...So many of the major and even historic moves in the market I've seen over the last few years make so much sense in light of Ocean...

"I am so grateful...I can't express how much..."

—B.A., Chapel Hill, NC

"Wow!! Ocean theory is amazing. I never would have thought that such a magnificent order could exist in free flowing, often volatile markets which are affected by so many things."

—J.R., New Jersey

"Thank you so much for your work on Ocean Theory. After countless dead ends, the light about markets is coming on for me at last."

—A.N., Tokyo, Japan

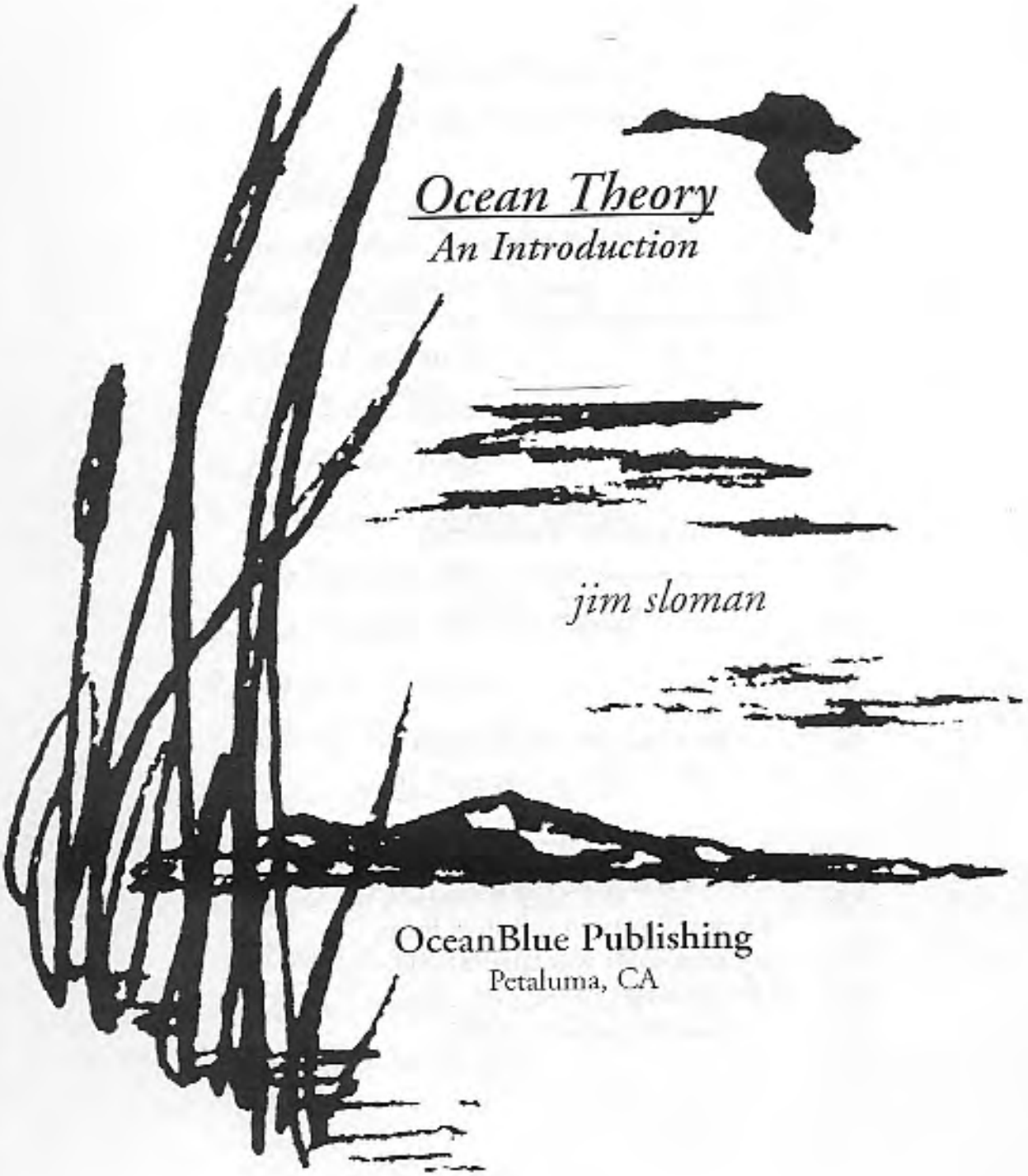
"I cannot mention you highly enough, Jim, for the creation of this theory, and Pat has done a great job with the software. What incredible stuff! All I can say is it's no less than stunning!! Thank you again.

"And the workshop made such an impact on my life in more ways than one."

—J.W., Charlotte, NC

"We're looking at markets in a way that has never been done before."

—J.T., Santa Clara, CA



Ocean Theory

An Introduction

jim sloman

OceanBlue Publishing
Petaluma, CA

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Preface

by Pat Raffalovich

A true story:

Jimmy Sloman is the originator of Delta, a trading approach that explains the outer symmetry of the markets. He also developed another approach, The Adam Theory, that explores the inner symmetry. It is an approach that in essence says: Watch what the market is doing right now, because that's the best predictor of its future path. This book is about his third and most significant discovery—Ocean Theory—a set of analytical approaches that model and describe the deep core of market movements.

The story behind this book has a lot of significance for me. I first met Jimmy in 1991 at a seminar where he was a guest speaker. The interesting thing about the investment seminar was that it was about intuition, not about specific technical techniques to apply to market analysis. Luckily, I had already determined that the success that we achieve in our

quest for trading profits is not completely a function of what we know about market behavior, but also what we have learned about ourselves.

I quickly realized that Jimmy was someone who had spent a great deal of time trying to figure out exactly who he was, and how the rest of us can also learn to understand ourselves. In the process, he had learned a great deal about how markets behave. By understanding ourselves, and how we respond to events, we can estimate how others will respond, and therefore we can see more clearly into the behavior of the market. I learned a lot about myself at the seminar and more importantly, I had met a new friend, Jimmy Sloman.

He and I continued our friendship over the next few years, visiting each other when possible and generally "staying in touch," though our life paths were in different directions. He had just begun a book that was to become *Handbook for Humans*, and as he explains it, he tried to write the book that he wished someone had given to him early on as a field-guide to navigating the passage of life. (*Handbook For Humans* is now available.)

Jimmy had already discovered Ocean in the mid 1980's, although I didn't know that until well after I met him. My path took me deeper into market and personal analysis, forming an investment software company with a partner, and working with several well-known and respected market analysts.

By early 1997, I was back on my own, and had turned my attention to trading for myself again. I was particularly interested in the concepts of multiple time frames, realizing that the best trades normally develop when several time frames line up in synergistic agreement. Knowing that Jimmy was probably my best avenue to a solution to the problem that I was encountering, I turned to him for advice. I'll never forget the call I made to him and how it has now changed my life.

I asked him, "Jimmy, we both know that when several time frames line up, it produces the best moves". He agreed with me and then I asked him the two most important questions that I had. "When looking at various time frames, which way would you go, from shortest to longest or vice versa? His answer, without hesitation, was "both ways." Obviously an interesting way of approaching the issue, but I wondered how it could help me, since it appeared that to follow his advice would be difficult to implement with a computer program.

I let it slide for the time being and asked my second question, which was, "Which time frames should you look at and how would you determine them in advance?" Once again, without hesitation, he shot an answer back to me. He said, "You need to look at all of them at the same time and let the market itself tell you which ones have the most significance, since that changes with time."

Once again, my mind dis-jointed a little, since I expected that the real time computational power necessary to use his advice wasn't available to me. Needless to say these were intriguing answers to my questions, and I intuited that they were probably correct, but how was I going to use anything he'd told me?

We talked a few more minutes, and then he hesitated and said, "You know Pat, these are the very issues that I addressed a few years ago when I was studying markets, and I've come up with the solutions. I call the methodology **Ocean**. It's a mathematical model that analyzes the market on all time frames. Once I'm done with this book *(Handbook for Humans)*, I'll show it to you."

Actually, he had once briefly talked about some of the more interesting aspects of the approach, but I was on a different path of market inquiry relating to swing analysis, and he was too deep into his book to

break away long enough to fully complete the math and train me on a method that even he hadn't completely worked out yet.

A month or so later he called me and asked if I was interested in seeing how Ocean works and if I would be open to the idea of developing the specialised software necessary to make it available to other traders. I said yes to both questions. I was fascinated by the ideas in what he had told me before about it, and by virtue of my background, I have a good deal of experience in converting trading ideas into code and making it available to the trading public. (Though I must say, I haven't seen anything like Ocean.)

Jimmy and I continued to talk and the outcome of those talks has produced the pages you are now reading as well as advanced developments of the theory as embodied in the Ocean Master program.

I hope you receive as much insight and gratification in learning these beginning elements of Ocean Theory as I have.

—Pat Raffalovich

Introduction

A free market, we could say, is in the business of digesting information and rendering it useless. It's an organism for metabolizing information, and as with any organism, once it has metabolized its food, that food is no longer useful to it.

In the case of a free market, the information that the market seeks can only come in the form of buy and sell orders. The market has no other way of receiving any information.

An example. Let's say that a hundred people in the world know that a severe draught is going to affect the price of coffee next month, but that they have told no-one else and also have done no buying or selling based upon what they know. Does the coffee market "know" this information yet? No, it's completely unaffected by it.

Only when some person or institution starts buying or selling based

upon that information can the market begin to receive it, and the more people or institutions who do so, the more the market can be said to "know" this particular piece of information.

When that piece of information is widely known among those who participate in that market, and corresponding long or short positions have been taken based upon it, then the market can be said to have fully digested or discounted the information available up to that moment, and it is no longer possible to make a profit based upon that information, unless the information changes.

At that point the information may be fascinating and even accurate, but it is no longer possible to make a profit upon the information, simply because a market has no way of distributing free money to those who don't possess some food that the market hasn't digested yet.

Only if one possesses information that most other market participants don't know yet does the potential of a profit based upon that information exist. This may seem obvious, but it is violated frequently in practice by many traders, as we'll see.

Of course, one can always make a profit by luck or accident, but trading that is profitable long-term cannot be based upon the whims of luck for obvious reasons.

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Basically, there are two types of information available to a free market. The first type is what is called "insider" information. If you know that GM is going to raise its dividend next month, and this is not public

knowledge yet, you could profit very well through your inside information. However, profiting from this type of information is illegal in most countries.

The second type of information occurs if you can usefully analyze a market, from public information, in a way that only a few market participants know about. In this case you would also have "inside" information, but in a way that is legal and usable.

The potential misjudgement comes when we acquire some system or method of approaching the markets that is widely marketed and available, whether classic or modern. No matter how adroit the system or approach may have been in the past, as it is more widely marketed and available to market participants, its consistent profit potential must go down, because the market is increasingly digesting this information.

As a market increasingly digests a particular way of analyzing or approaching that market, the method becomes more and more ineffective for purposes of making a profit. It may still be useful in an academic sense, or as a subject of intellectual fascination, but it must become less and less satisfactory as a profit-making engine because it has the same limitations on life-span as any other "insider" information that is becoming public knowledge.

What usually happens is this: Gann or Wykoff or some other brilliant analyst comes up with a theory or set of theories that look at markets in a new way, the newer and more radical the better (because the less like other systems that are known by the market). And with this new approach the analyst makes successful profits or predictions.

At length the theory is published, but its knowledge and acceptance into the marketplace are very slow at first. It is simply not very widely

known yet, and for that reason its profit-making potential continues, though slightly diminished since it is known by a few more participants.

As time goes on and the theory becomes more widely known, though, its profit-making potential goes down even though it continues to make predictions that sometimes are fulfilled. What happens is that the predictions become more "sloppy" on average.

As an example, let's say a turn is predicted by Gann timesquares. The turn might come earlier than it otherwise would as more participants take positions anticipating the turn. Or the turn might become more rounded instead of angular. Or it could become sloppy in other ways.

In any event the profit potential goes down on average as the market is increasingly in possession of this information. Any particular turn or prediction, of course, for various reasons could be as accurate as before, but the predictions on average become less amenable to making profits.

Finally the theory becomes very widely accepted and acclaimed, and ironically, it is just at this point that the theory stops making money on average for participants. Particular participants or predictions may get lucky, but in general the system or approach is much less effective.

As time goes on, even though the theory or approach is widely acclaimed, participants who are alert begin to notice that they are not making money on average using this approach. In fact, they begin to have losses using it because the market can see them coming.

And as this becomes slowly known, the theory or system becomes less popular and is slowly discarded by more and more people. Finally it becomes relegated to the dust-bin of market history—interesting perhaps, but discredited or irrelevant.

As this happens, its profit-making potential begins to pick up again and the few participants who are using it begin having some good successes. And they tell their friends or associates—and the cycle starts all over again.

But not quite. Instead of oscillating back and forth between popularity and unpopularity, that is, between non-profitability and profitability, the system or method usually settles into a kind of symbiosis with the market, whereby those participants who are using it make neither profits nor losses on average.

However, that of course means that they're taking losses on average, because of transaction costs, bid & asked spreads, and other sources of friction against profits. Yet the approach still has some successes and these are widely touted, and so the process continues.

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How, then, should an investor approach the issue of market theories, systems and approaches? In my opinion, the only way to stay ahead of the market's digesting of information is to partially develop your own system.

That way, the market has no means to know about your "insider" information. The exception to the above comes from your own buying and selling in that market, but that is a small fraction of the market's activity.

To that end, this book is designed to give you a deeper understanding of how markets work internally, and then to give periodic suggestions as to how you could explore from there in your own investigations.

Please note: As noted on the website below, The Ocean Book is designed to increase your comprehension of how markets function internally. While this book can be used as a launching pad for your own investigations, it is not intended to provide a comprehensive, tradable approach to markets. That is the province of Advanced Ocean theory and the Ocean Master program.

Info about the Ocean Master program, if you wish to look into it, can be found by going to the website *www.mayyoubehappy.com* and clicking on the button "Ocean" on the home page.

1. Delta Theory

My approach to markets in recent years, and my interest in them, has been to look at the whole issue of non-arbitrariness, that is, for elements or aspects of market analysis which may not depend upon the particular biases of the person observing the market.

In every system or approach to markets which I have come across I have noticed that at some point the user of that approach has to supply some relatively arbitrary number or constant or trendline or whatever, and that this input radically determines how the market looks to that observer.

For instance, let's take a simple moving average. In order to use a moving average, we have to specify the number of days to which the moving average will apply. A 10-day moving average is going to present a much different picture or "window" on a market than a 200-day MA.

As a slightly more sophisticated example, if we use an exponential moving average we have to supply a constant for the EMA. And a constant of 0.1 is going to present a radically different picture of that market than a constant of, say, 0.5.

If we use trendlines, we run into the same problem. Which trendlines we draw depends enormously upon the time frame that we're looking at, whether we're connecting bottoms or tops, and which tops or bottoms.

When I first started trading I used trendlines, and when using a given chart I couldn't help noticing that after awhile the chart would be covered with lines going every which way, connecting all manner of bottoms and tops, some short-term, some longer-term, some inbetween. And the question became, which ones really matter? The answer, it seemed, depended on my particular biases.

In Elliott Wave, I noticed that it was always pretty clear after-the-fact exactly where the five impulse waves were, but it wasn't always so clear in the moment. Was this movement a 5th wave or an extension of a 3rd wave? I noticed that different Elliott experts gave different interpretations of the same market and that even the same expert often had "alternate" interpretations.

Please understand, this is not a denigration of Elliott or any other market approach—since all can have value under the right circumstances—but rather, pointing out that all current approaches are subject to this problem of arbitrary input.

The same arguments can be applied to almost any market approach from Gann to Wykoff to Dow, among the classics, as well as to more modern systems and approaches. A little experimentation with various market approaches and you can verify this for yourself.

One answer to this challenge is to "tune" the system, that is, to back-test the system using a lot of data and have the backtesting suggest which constants or inputs yield the best results. Of course the problem there, among others, is that 5 years of back data may suggest a much different constant or set of constants than 50 years of data. Which is more significant, the larger data set or the more recent one? The answer to this question seems to involve more arbitrariness.

Then there's the problem that the market can quite suddenly change its character in a very radical way, so that the old constants or inputs are no longer so relevant. So the question kept arising in my mind: Is there some approach to markets that involves less arbitrariness?

****

My first approach to this question was the market approach now known as the Delta Phenomenon.

In the summer of 1983 I was involved as a professional trader in Chicago and I also happened to be intrigued by the movements of the moon. The Delta Phenomenon grew out of the cross-pollination of these two activities, and later grew to include the interactions of the various movements of the sun, moon and earth.

Why those bodies and not other planets or the stars? We can easily see in an informal way why the movements of the sun and moon are so much more important. Simply look at the sky. Notice that the sun and moon are so much larger to our view than the planets or stars—a rough way of indicating their much greater relative influence on the earth.

This kind of market approach intrigued me because it seemed to be based on something less arbitrary than one based on the user input-constants required by other approaches, even something as sophisticated as, say, Fourier analysis.

Of course, Delta has some arbitrariness of its own, the foremost of which is the judgment (therefore, some arbitrariness) required to deduce the "personality" of a given market in a given Delta time frame. For this reason I kept looking for something else. Was there some approach to markets that was more closely non-arbitrary? That was my question.

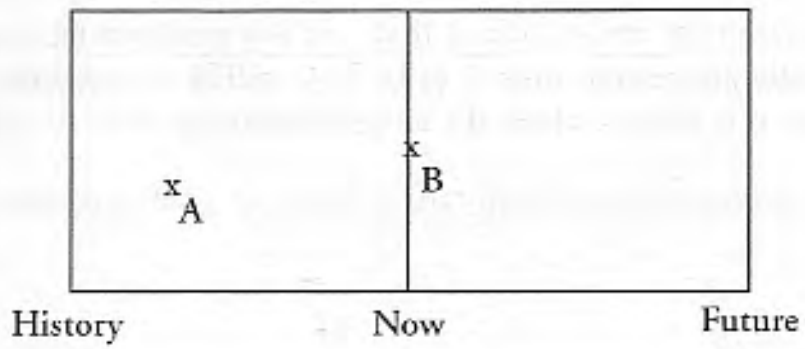
This doesn't even scratch the surface on Delta theory. For additional information, please consult *The Delta Phenomenon,* written by Welles Wilder based on my lecture notes, and available from *deltasociety.com.*

There's a fascinating new timeframe in Delta which I've come across, and in my opinion it may be the most important one. It's making some astonishing predictions. Perhaps it will be presented someday in a new edition of *The Delta Phenomenon.*

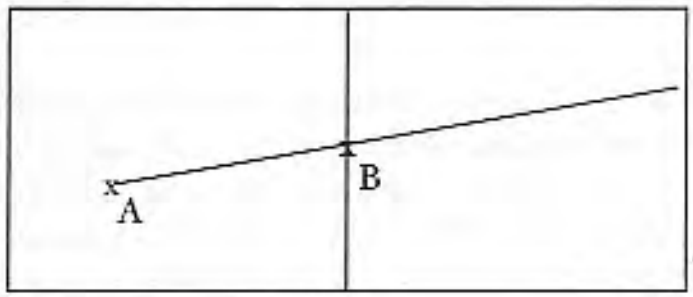
2. Adam Theory

My second attempt at exploring a non-arbitrary way of looking at markets led me to what is now called Adam Theory.

I asked myself this question: If you had a sighting of some object (a submarine, say) at point A at one time and another sighting at point B at the present time and you had no other information, what is the least arbitrary thing you could say about where that object might show up in the future? Let's graph it:



A practical answer is that we should look somewhere along the line extending ot beyond A-to-B.

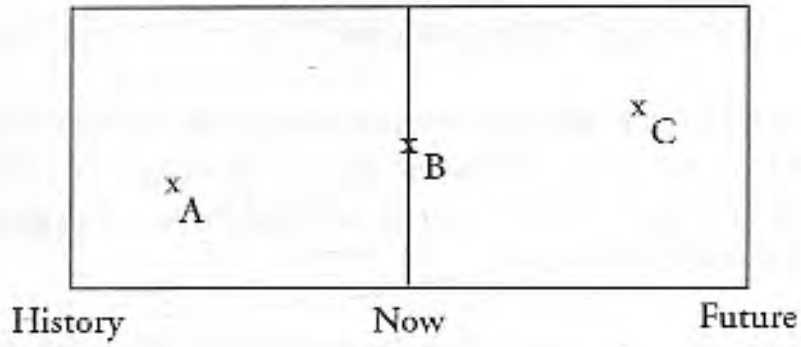


But where along this line should we look? Again, we have limited resources so we can't look everywhere along the line. And a deeper problem is that we don't know the route the submarine took to get from A to B. We might be assuming that it took a straight line from A to B, but in fact, we don't know that.

The only facts we really know are that it was sighted at A and subsequently sighted at B. And we don't know the route it took to get from A to B, so we can't assume it's travelling on a straight line extending out beyond A-to-B.

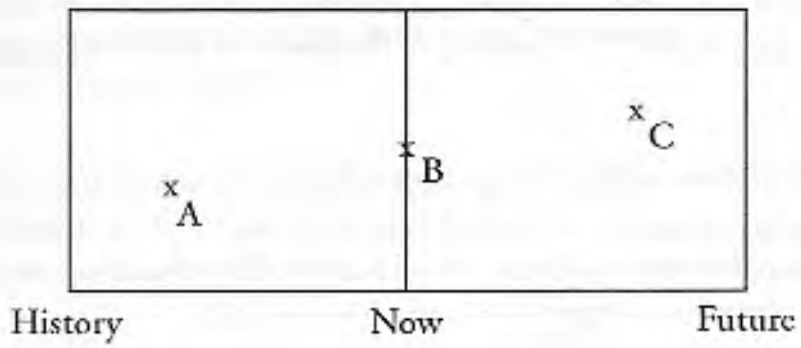
If we had to pick out one point C where we would be most likely to sight this submarine again, where would it be?

Really, there's only one point and that's the one representing an exact repetition of the movement from A to B. So C will be an equal distance out from B as B is from A, along the line extending out from A-to-B.



Notice that point C does not assume that the submarine travelled a straight line from B to C. It could very well have followed a circuitous route from A to B, and also from B to C. And of course it may not show up at C. Nevertheless, point C is the *most likely place* where it will show up. No other point is nearly as likely.

And what is the best *time* to look for the submarine at point C? An exact repetition will again be the most likely. An equal time interval from time T/Now out into the future to T/Future as T/Now is from T/Past. If the sub was at point A at 3 o'clock and point B at 4 o'clock, our best chance fro sighting it again will be at point C at 5 o'clock.

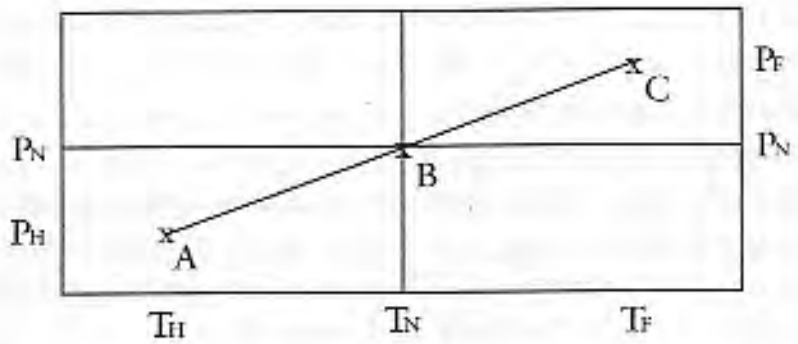


An interesting thing to notice is that this line of reasoning will hold

true for *any time frame* and *any distance scale.*

Now, in order to talk about the market more precisely, let's establish some terminology. T_N is Time/Now, or the now moment; T_H is Time/-History, or some moment in the past; T_F is Time/Future, the equivalent moment in the future.

And similarly, P_N is the price at this now-moment, P_H is the price at some moment in history, and P_F is the price at the equivalent moment in the future:

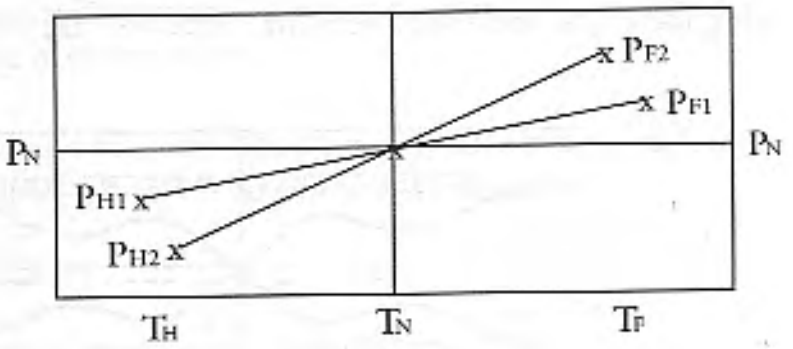


As with the submarine, if the market was found at point A (that is, price P_H at time T_H), and then at B (that is, price P_N at time T_N), then the most likely place to find that market in the future is at point C (price P_F and time T_F).

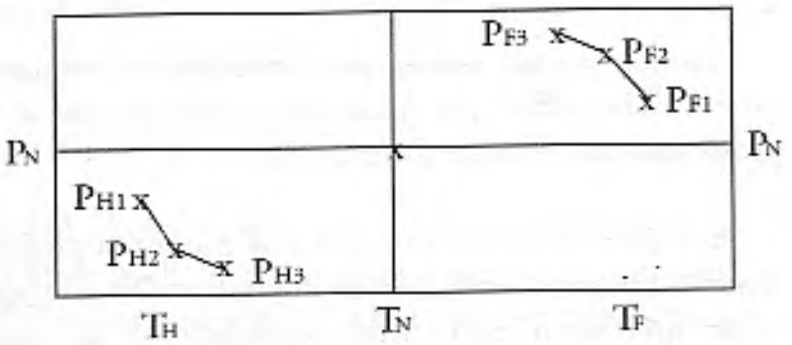
Or to put it differently, if P_H is some arbitrary historical price and P_N is the now price, then the most likely future price P_F will be an equal distance out from P_N as P_N is from P_H, along the line extending out from P_H-to-P_N.

The most interesting thing here is that the historical time T_H is completely arbitrary. Therefore we could have two historical prices P_{H1} and

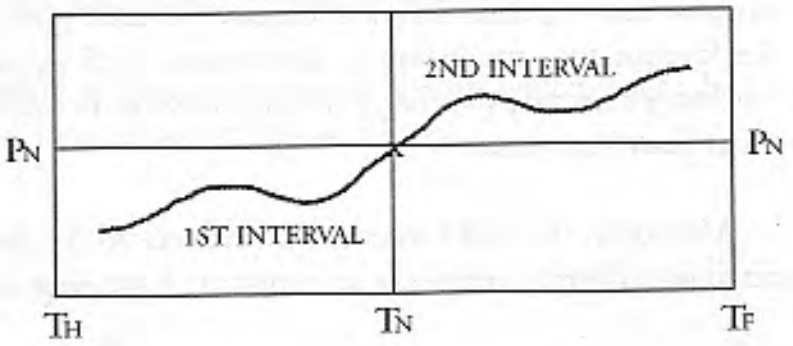
P_{H2}, generating two most probable future prices P_{F1} and P_{F2}:



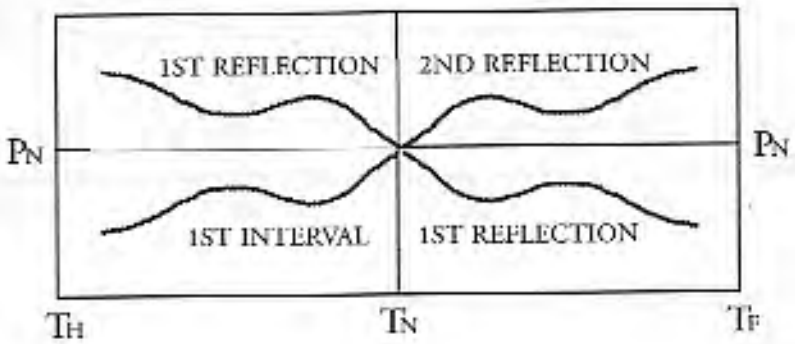
Or three most probable future prices:



Which, extended to an infinite number of prices along a line, becomes the first and second intervals:



Notice that the second interval is a mirror image of the 1st interval, but in a special way, because it has been reflected *twice*—reflected first along the Y axis and then along the X axis (or vice versa):



Another way of talking about the 2nd reflection (also called the 2nd interval, also called the Adam projection) is that it is the market's own projection out into the future.

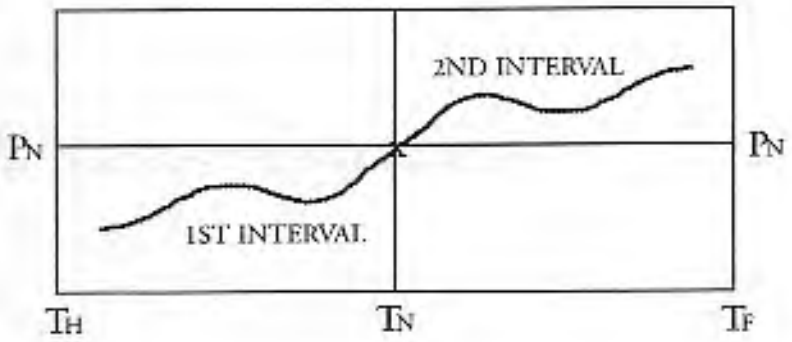
As a side matter, we can note that the truest projection into the future always equals the number of dimensions in the space. Thus the 2nd reflection is the market's truest projection into the future in 2 dimensions. In a 17-dimensional space, the truest projection forward would be the 17th reflection.

Another cool thing about the 2nd interval is that it constantly and automatically updates its own forecast. As each now moment is reached, the forecast into the future is also revised. And we can call this an *inner symmetry*, since the symmetry spreads outward in both directions from the inner (now) moment.

Moreover, the 2nd interval (2nd reflection) is relatively non-arbitrary, since no arbitrary numbers or constants have been introduced. No spe-

cific number of days, minutes or other time intervals have been specified. No specific sequences of number, such as the Fibonacci sequence, have been used. No numbers, such as round numbers or certain fractions, have been given prominence over any others.

Additionally, there is no lag time. The 2nd interval is always projecting out from the now moment, with no time lost to averaging.



Finally, the 2nd interval adjusts itself to you. You have only to look at the 2nd interval and ask yourself, If the market really went that way, *would I want the trade?* Thus it automatically adjusts to your style of trading, the level of market activity that you're comfortable with, and so on.

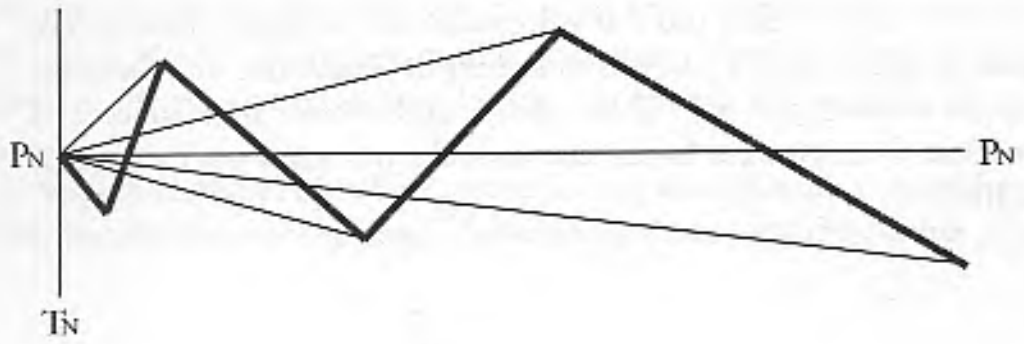
We can only cover a few high notes here. For additional information on interval theory, please consult *Adam Theory,* written by Welles Wilder based on my lecture notes, and available from *deltasociety.com.*

There are some further advances in interval theory which might be presented some day in a new edition of *Adam Theory.*

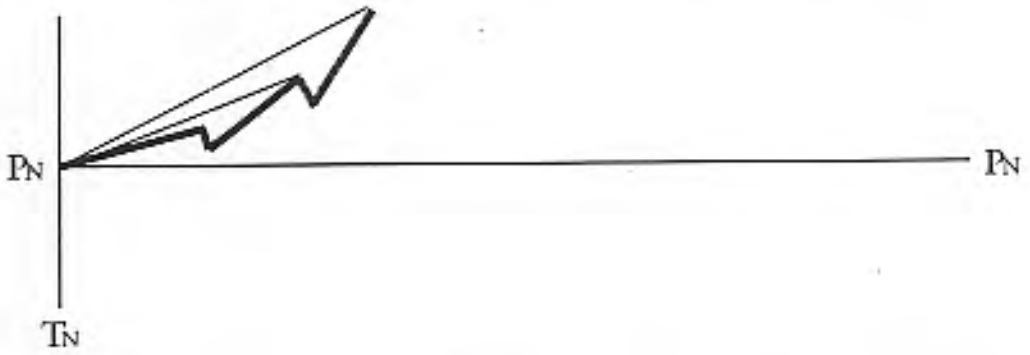
3. The Ocean Equation

Now we come to the theory mentioned in the last sentence or two of the *Adam Theory* book, now called Ocean.

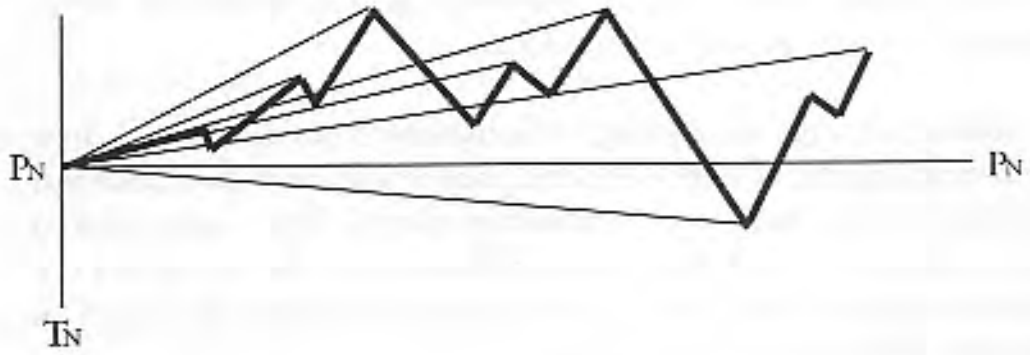
I noticed a strange thing going on in markets. I noticed that if I drew a line connecting the now moment and price to anywhere the market was in the past (or conversely, as it is projected into the future using interval theory), that the slope of that connecting line was smaller the farther out I went. It's ordinary and obvious, of course, but it also struck me as a bit strange too. Why was that happening?



But, you might object, what about an example such as the one below, where the steepest angle is the longest time from the now moment?



Notice, though, that if we extend the time interval, sooner or later the chart falls into the pattern. For example:



You don't have to draw too many slope lines on too many charts before you realize that the slopes lessen as time extends further out, and that conversely, in trading you will desire shorter and shorter timeframes as a result, since the higher (or lower) the slope the quicker a profitable price is reached.

But this goes against common sense, since we all know successful traders who trade at different timeframes. Some traders do indeed thrive on very short trades, a few minutes or even less, whereas other traders, equally successful, usually take trades in timeframes of weeks or months. Indeed, one of the most successful "traders" ever, Warren Buffett, takes trades in timeframes of years or even decades. So what's going on?

What occured to me after a while was that the market didn't have a linear relation to timeframes, that is, it had a different relation to longer timeframes than to shorter ones. Hence traders with all sorts of different timeframes could, if they were good, make money in markets. But what was this relationship?

I began to investigate mathematically the difference between different timeframes in markets, and in different markets. And I soon realized that I needed to use the percentage difference travelled by price rather than the absolute difference, in order to compare moves in different markets and time frames equally.

But percentages have a problem, that equal percentages up and down don't come back to the same place. For instance, if a stock is at 100 and goes up 50%, it's now at 150. But then if it falls 50%, it doesn't go back to 100, but rather to 75. Percentage moves in opposite directions don't cancel each other out.

That's when I realized that I needed to use logarithms of prices instead of prices themselves. It would have the same effect as using percentages of price moves, with the important difference that a logarithmic move up or down of the same amount would bring you back to the same place.

So in the summer of 1986 I started fooling around with a spreadsheet. The first column was the date. The second column was the closing price

for that day. And the third column was the natural log (ln) of the price, multiplied by 1000 so that I'd be looking at whole numbers. I happened to be studying wheat futures, and it looked like this:

Date	Price	ln(P)
760102	3393	8129
760105	3521	8167
760106	3491	8158
760107	3580	8183
760108	3563	8178
760109	3538	8171
760112	3643	8201

Then in the fourth column I put the difference between today's log price and yesterday's, so that, in effect, I was looking at an equivalent to the *percentage difference* occurring in the price each day, and I multiplied this by 100 to give a nice round positive or negative number to look at. (For convenience sake I started the fourth column on line 100, to make historical calculations easy should I want to do those.) It looked like this:

760518	3539	8172	D1(lnP)
760519	3518	8166	
760520	3493	8159	-713
760521	3488	8157	-143
760524	3646	8201	4430
760525	3550	8175	-2668
760526	3590	8186	1120
760527	3631	8197	1136
760528	3621	8195	-276

The first three columns still contain the date, price and natural log of the price. D1(lnP) is simply the one day difference of the log price today and the log price yesterday (multiplied by 100).

But I was interested in why different timeframes behaved differently, and so I began to investigate differences of more than one day.

To keep things simple, I decided to look at differences of 1, 2, 4, 8 and 16 days, to start.

So now I added four more columns to the spreadsheet after D1(lnP):

D1(lnP)	D2(lnP)	D4(lnP)	D8(lnP)	D16(lnP)
-713	-1308	-3295	1065	1937
-143	-856	-2966	287	2909
4430	4287	2979	3432	7251
-2668	1762	905	-2118	3614
1120	-1548	2739	-556	5173
1136	2256	4018	1052	6691
-276	860	-688	2291	5623
3073	2797	5053	5959	9047
-564	2509	3369	6108	7173

Again, D1(lnP) is the difference between the log price today and the log price yesterday. D2(lnP) is the difference between the log price today and the log price 2 days ago. D4(lnP) is the difference between the log price today and the log price 4 days ago, and so on.

My interest was in how much the market tends to move in different timeframes. I didn't care if the market was moving up or down in a particular timeframe; my interest was in how large its movement was.

So I took the absolute value of each of those differences in those columns, and added five new columns. Now it looked like this:

abs(D1)	abs(D2)	abs(D4)	abs(D8)	abs(D16)
713	1308	3295	1065	1937
143	856	2966	287	2909
4430	4287	2979	3432	7251
2668	1762	905	2118	3614
1120	1548	2739	556	5173
1136	2256	4018	1052	6691
276	860	668	2291	5623
3073	2797	5053	5959	9047
564	2509	3369	6108	7173

Note that the numbers in the picture above are the same as the numbers in the previous picture, except that now they're all positive. abs(D4), then, represents the absolute (positive) value of the difference between today's log price and the log price 4 days ago, etc.

What I was looking at now in those columns was the extent to which the market had moved in that timeframe, regardless of what it's direction had been (and expressed through logs in a way that was similar to looking at percentage movements).

Now I wanted the average of each column. *What was the average movement of the market in each timeframe?*

The spreadsheet had about 10 years of wheat data, over 2500 rows, so I dutifully extended the calculations down, and then took the average of each column. It looked like this, five numbers above the names:

960	1383	1936	2702	3938
abs(D1)	**abs(D2)**	**abs(D4)**	**abs(D8)**	**abs(D16)**

I looked at those numbers for awhile, knowing they represented the average movement of the market in each time frame. Then I wanted to see what the ratio was between the numbers. So I took the ratio between each average and the one before it, and that resulted in the four numbers on the top row:

	1.44	1.40	1.40	1.46
960	1383	1936	2702	3938
abs(D1)	abs(D2)	abs(D4)	abs(D8)	abs(D16)

It struck me immediately that the four numbers seemed to be remarkably similar. Why should the ratio of each average to the one before it be around 1.4?

I checked 10 years or so of data with some other commodities to see if the ratio was similar, and it was. Very puzzling: It was always within a few points of 1.41 or 1.42.

Then it dawned on me: The square root of 2, 1.414. *When the time doubled, the average movement had increased by the square root of 2.*

At that point I thought momentarily that price changes happen as the square root of 2. But then I looked at the ratios again, and asked: What happens if the time increases by a factor of 4?

So I took the average movement over a 4-day period (1936) and divided it by the average movement over a 1-day period (960), and got a ratio of 2.02. I took the average movement over a 16-day period (3938) and divided it by the average movement over a 4-day period (1936), and got a ratio of 2.03. It looked like this:

		2.02		2.03
	1.44	1.40	1.40	1.46
960	1383	1936	2702	3938
abs(D1)	abs(D2)	abs(D4)	abs(D8)	abs(D16)

So when the time increased by a factor of 4, the average price movement increased by a factor of 2.

Then I did the same thing with 10 years of gold, 10 years of the S&P, ten years of soybeans, and so on. And the ratios were almost the same. Then I knew:

Price movement, on average, changes as the square root of time.

Or expressed as an equation: $\Delta P = \Delta T^{1/2}$

Realizing this equation in the late summer of 1986 was a very big deal for me. I remember actually screaming when the equation occurred to me. It astounded me that this hidden order could be going on behind the scenes. What's more, that it was going on in all time frames in all markets simultaneously. Astounding!

A few years later I found out that I did not originate this equation after all. It is ultimately derived from a paper published in 1905 by Einstein on *brownian motion,* and applied to time number series in 1951 by H. M. Hurst.

Einstein found that a particle suspended in a liquid would move randomly, and that the total range of the particle's movements would expand according to the square root of time.

That in turn is not unrelated to the laws by which gravity and light propagate outward. The brightness of a star diminishes in proportion to the square root of one's distance from the star. Similarly, the influence of gravity diminishes according to the square root of the distance from the gravitational object.

Picture a central point that is radiating something. It can be a star radiating light waves or a planet radiating gravity waves. It can be the starting point of a particle in random motion, its sphere of motion expanding outward. It can be the now moment of a market, radiating out movement in price.

In each case, from that central point, picture an influence expanding outward—and weakening in force—at a rate proportional to the square root of the time or distance traveled.

That's what the market does, in effect.

I now had this equation about markets which I called the Ocean equation (because it was so comprehensive), and I was blissfully unaware that it had already been discovered.

As I studied the Ocean equation, I continued to be amazed that all markets and all time frames in all markets were simultaneously following it. Truly astounding.

But what could be done with it?

4. *The Ocean Index*

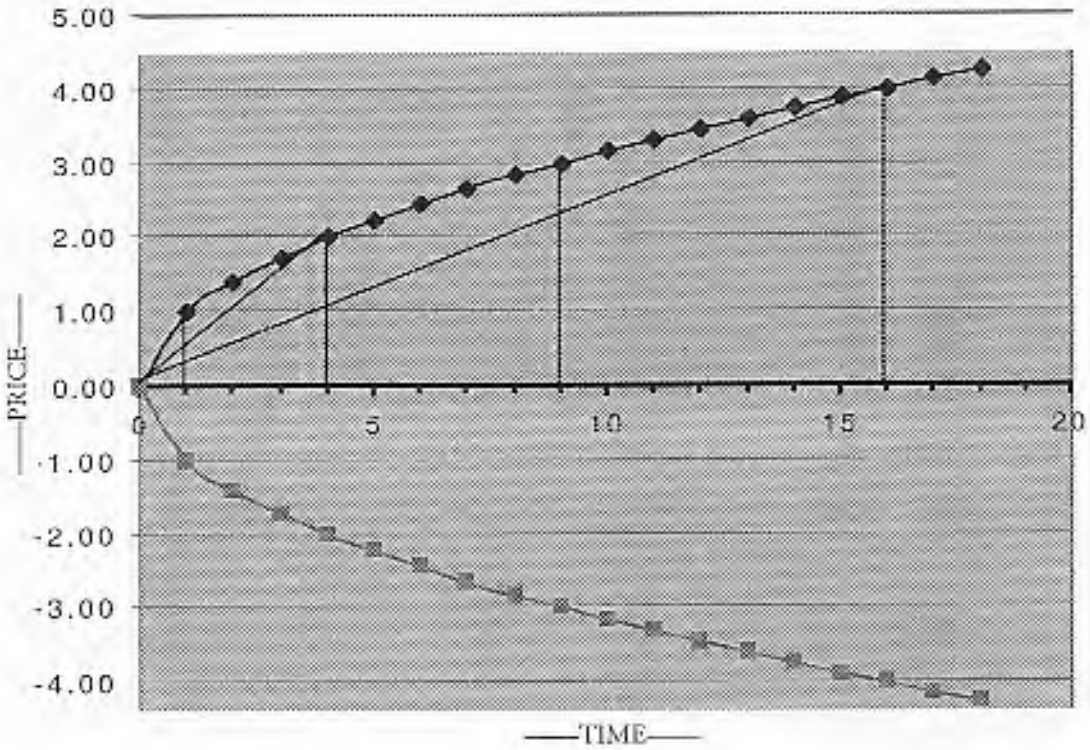
This remarkable equation, I later found out, is also connected to what is called *power-law scaling* in fractals.

But what really does it mean in markets?

Again, picture an influence expanding outward—and weakening in force—at a rate proportional to the square root of the time or distance traveled. In a free market, that expansion is *the average movement of price away from its now starting point as time moves outward.*

$$\Delta P = \Delta T^{1/2}$$

Charted, it looks like this:



Let's look at this chart closely.

Let's say that time is being measured in days, though it could be anything. Notice that at the end of 1 day price will have moved, on average, up or down 1 price-unit. At the end of 4 days price will have moved, on average, up or down 2 units (square root of 4). At the end of 9 days price will have moved, on average, up or down 3 units (square root of 9), and so on. This is the market's average expansion in price from its current starting point, over time.

Knowing this, *we can now predict the average movement over one day by knowing the average movement over some other time frame.* For example, in the chart above we could take the average price movement over 16 days—4 units here—and divide that by 4 (square root of 16) to get a prediction of the average movement over one day.

Similarly, we could take the average price movement over 11 days, say, and divide by the square root of 11 to get a prediction of the average movement over one day.

The chart below shows such an idea where the number of days, instead of being 1-2-4-8-16 as before, has now been selected randomly. What we're looking at below is the absolute differences in the logs of prices over the various time periods of 1-7-13-22-41 days, each one an average of about 10 years of closing prices in wheat:

960	2540	3497	4620	6286
abs(D1)	abs(D7)	abs(D13)	abs(D22)	abs(D41)

If we take each of the numbers above and divide it by the square root of its corresponding time period, then, we should get a number very close to the number—960 in this case—for 1 day. Let's see:

	1.00	1.01	1.03	1.02
960	960	970	985	982
960	2540	3497	4620	6286
abs(D1)	abs(D7)	abs(D13)	abs(D22)	abs(D41)

To show how close those numbers are, let's now take the ratio of each one to the 1-day one:

	1.00	1.01	1.03	1.02
960	960	970	985	982

What this tells us is that we can use average price movement in any time interval to predict average price movement in any other interval—and specifically in a time interval of 1. Once we can do that, *then we have a way to "normalize" price movements in different time frames to make them directly comparable with each other.*

We simply take the change in the log price over any time interval and divide it by the square root of that time interval to "normalize" the price movement and make it directly comparable with any other movement in that market. Each price change, normalized in this way, is then called the *OceanIndex*. For example, in our wheat chart it might look like this:



760518	3539	8172	o1	o2	o3	o5	o8
760519	3518	8166					
760520	3493	8159	-713	-925	-1630	-1671	377
760521	3488	8157	-143	-606	-838	-1537	102
760524	3646	8201	4430	3031	2063	655	1213
760525	3550	8175	-2668	1246	935	139	-749
760526	3590	8186	1120	-1094	1664	906	-196
760527	3631	8197	1136	1595	-238	1733	372
760528	3621	8195	-276	608	1143	1674	810

The 1st column, as before, is the date. The 2nd column is the closing price. The 3rd column is the natural log of that price (multiplied by 1,000 to give a nice round number to look at). The row with the arrow is the hundredth row of the spreadsheet (for convenience' sake) and that is where we begin our calculations.

The fourth column (**OceanIndex/1**, or **o1**), then, is the difference between the (natural) log price today and the (natural) log price 1 day ago, divided by the square root of 1 to normalize it.

A final adjustment is to multiply the result by 100 to give a nice round number to look at.

OceanIndex/2, or o2, is the difference between the log price today and the log price 2 days ago, divided by the square root of 2 to normalize it. OceanIndex/3, or o3, is the difference between the log price today and the log price 3 days ago, divided by the square root of 3. And so on.

Notice that we're using the Fibonacci sequence of 1-2-3-5-8 days as our lookback lengths. There's nothing mystical about that; it's simply a convenient way of studying different lookback lengths in this market, of giving us a good "snapshot" of this market, so to speak. (Other snapshots could be taken with other sequences.) It can be continued as below:

o1	o2	o3	o5	o8	o13	o21	o34
-713	-925	-1630	-1671	377	553	-390	-152
-143	-606	-838	-1537	102	635	-378	-200
4430	3031	2063	655	1213	1970	1231	405
-2668	1246	935	139	-749	1010	668	-254
1120	-1094	1664	906	-196	1419	1257	96
1136	1595	-238	1733	372	1370	1268	190
-276	608	1143	1674	810	1118	1451	181
3073	1978	2271	1067	2107	1613	2103	838
-564	1774	1289	2008	2159	658	1768	886

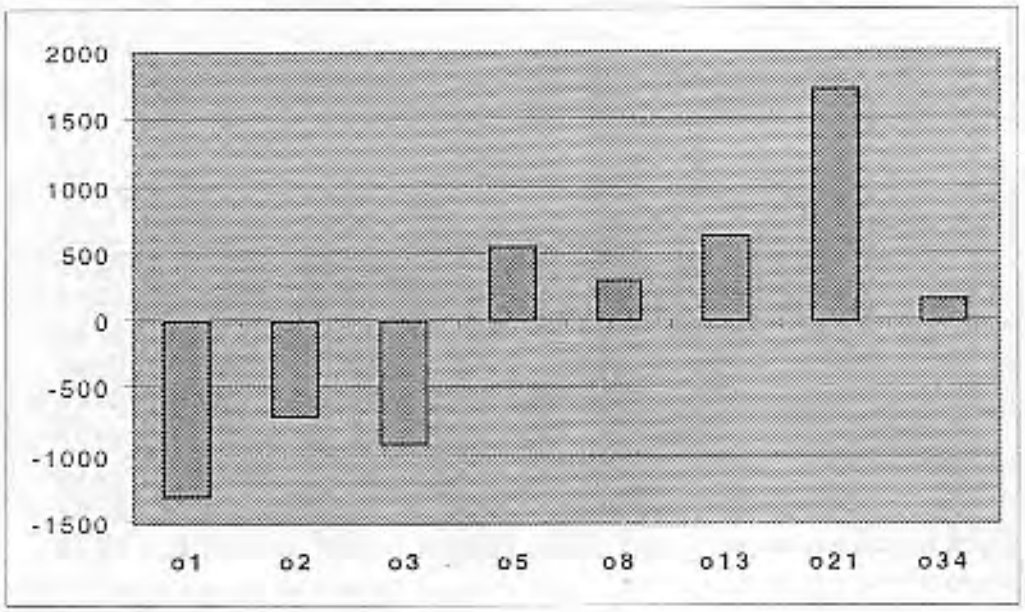
Notice that since we've been using log prices instead of prices themselves, that we're (to use a metaphor) looking at percentage changes here instead of absolute changes. This allows us to directly compare price changes in any market with price changes in any other market.

Put together, this means that the OceanIndex of any time interval in any market can be directly compared with the OceanIndex of any other

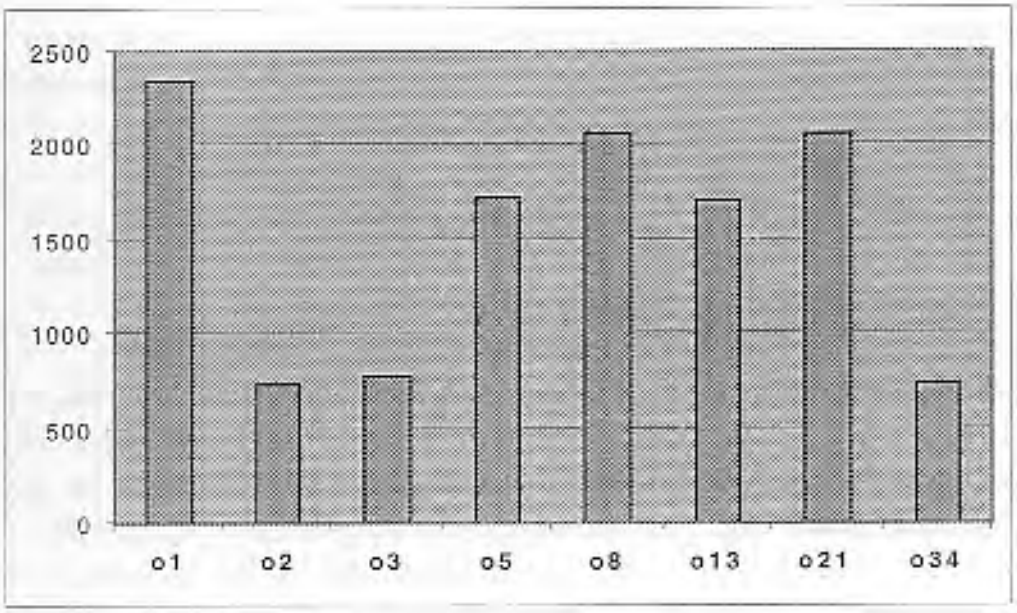
time interval in any other market. Or to put it differently, OceanIndexes provide a way to compare all time frames in all markets simultaneously.

Why would we want to do that? Because the change a market makes in a given time frame is an indication of its "thrust" in that direction in that time frame. And those different thrusts can be compared.

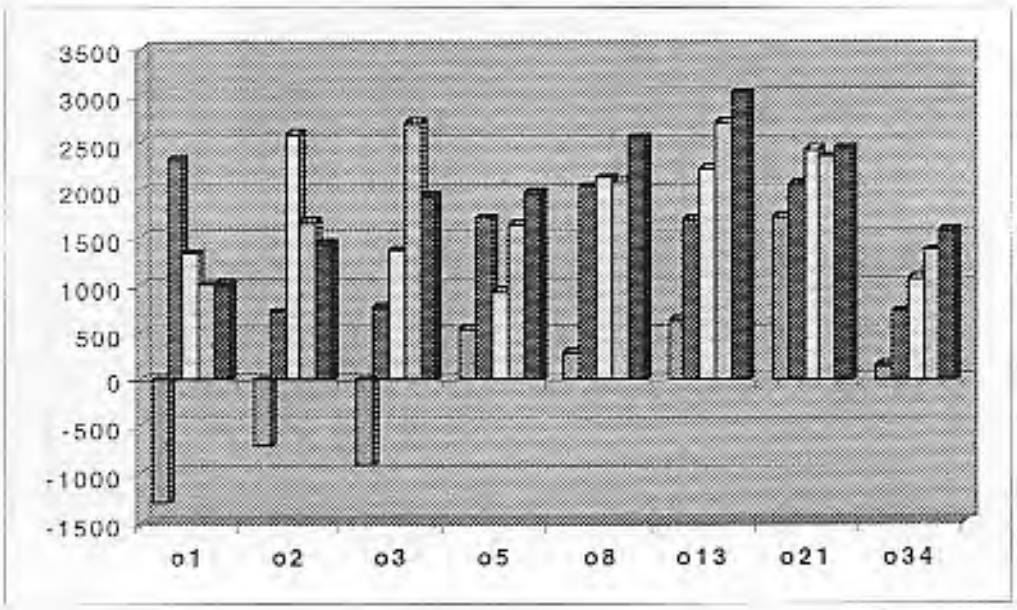
For instance, we could graph line 110 of the spreadsheet above. The "snapshot" of the OceanIndexes would look like this:



Since all OceanIndexes are directly comparable in absolute terms, we can compare them on the chart. There's some downside thrust in the short-term, but at timeframes of 5 days and above, the thrust is on the upside at at average level of 500 or so. Except for the 21-day timeframe, where we see an upthrust above 1500. Let's look at the next day:



Above are the **OceanIndexes** for day 111. Notice that all the thrust is positive now. And there is a cluster of upthrusts in the 5-day to 21-day area. Now let's combine these charts and look at the next 3 days as well:

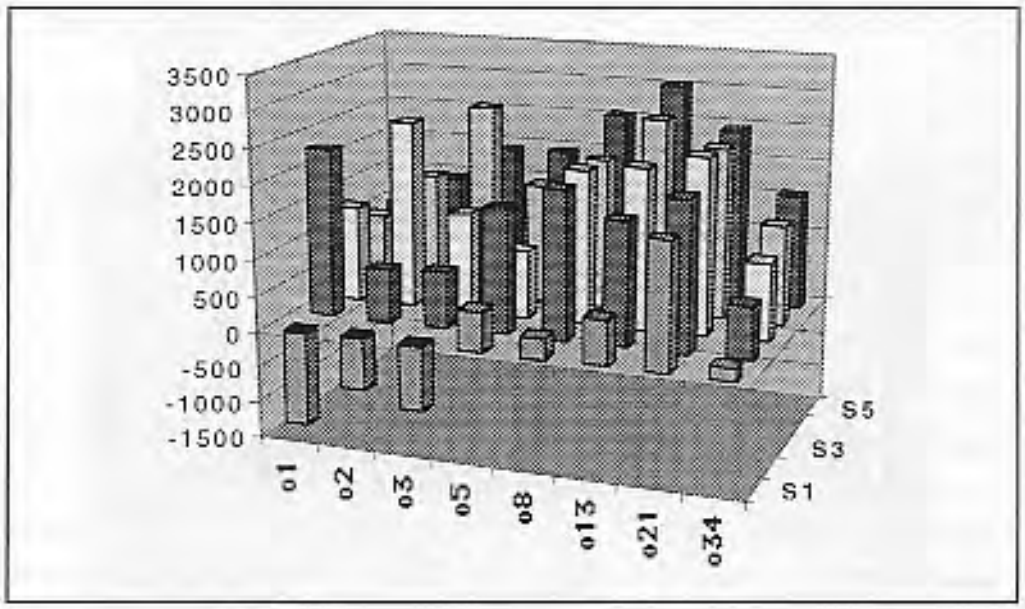


I call a chart like this an **Ocean snapshot**. It gives an instant picture of the activity in this market at different timeframes, all normalized so that they're completely comparable across markets and timeframes.

In the chart on the previous page, we can see thrust building in all time frames from 3 to 34 days, with the primary thrust centered around a 13 day timeframe at a level around +3000.

If we got into the position, we would expect to be in this trade for a couple of weeks, give or take, depending on how the Ocean snapshots evolved from day to day. This in turn would tell us a lot about where to place our stop, since larger timeframes require larger stops.

Another interesting way to look at an **Ocean snapshot** is to present it this way, as a three-dimensional column chart:



In the chart on the previous page, as time flows from front to back we can see the build-up in virtually all timeframes. Of particular note is the steady progression of thrust in the 34-day timeframe. Though the action right now is centered around a 13-day timeframe, the trade could easily turn into a longer-term trade.

At this point, in accord with the principles previously espoused, I'll leave it to the reader, if you feel it would serve you, to explore these approaches further and perhaps develop your own unique methodology in using **Ocean snapshots.**

I think one promising place to look would be to take exponential moving averages of the **OceanIndexes** in different timeframes and chart them along the lines used above. Later on in this book we'll look into a **Natural Moving Average.**

For now, we'll turn next to the **Natural Market Mirror.**

5. The Natural Market Mirror

Because **OceanIndex** numbers can be compared in absolute terms, a world of possibilities opens up. Most importantly, it allows us to average them:

Since in effect each number is simply making its prediction about what the average 1-day (log) movement will be, when it's averaged with another **OceanIndex** number, the overall prediction is simply enhanced.

What we can do then is let some sequence of time scales weigh in with their predictions by averaging them. It can be any sequence we like.

I personally often used a Fibonacci sequence for this since it allowed me to look at different time scales conveniently, with sort of a "not too much, not too little" feeling. For example, here's a spreadsheet where I used weekly S&P data:

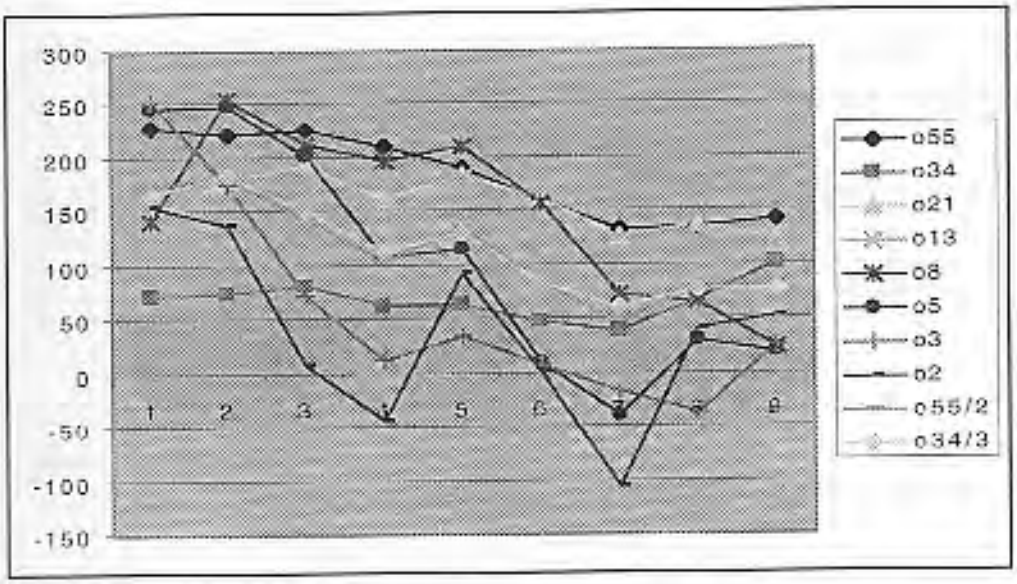
760109	9495	o55	o34	o21	o13	o8	o5	o3	o2	o55/2
760116	9700									
760123	9921	228	73	145	138	143	247	253	156	173
760130	10086	221	74	179	173	256	248	175	138	183
760206	9946	228	81	194	149	212	201	72	9	143
760213	9967	210	63	163	127	197	108	13	-42	105
760220	10210	190	64	185	182	211	114	35	93	134
760227	9971	160	47	162	123	158	11	7	1	84
760305	9911	132	39	127	183	73	-39	-16	-105	49
760312	10086	134	68	138	192	67	31	-35	41	79
760319	10058	141	102	123	173	23	20	25	52	83

In this example Fibonacci **OceanIndexes** from 55 to 2 were used, and then averaged. Notice how o2 and o3 **OceanIndexes** tend to jump around quite a bit, while o55 and o34 are more steady. This is typical.

Then I did some experimentation with including or not including lower-end and higher-end **OceanIndexes** in these averages, which I called **Fibonacci averages.** For instance, here 55/2 and 34/3 averages were taken:

o55	o34	o21	o13	o8	o5	o3	o2	o55/2	o34/3
228	73	145	138	143	247	253	156	173	166
221	74	179	173	256	248	175	138	183	184
228	81	194	149	212	201	72	9	143	151
210	63	163	127	197	108	13	-42	105	112
190	64	185	182	211	114	35	93	134	132
160	47	162	123	158	11	7	1	84	85
132	39	127	183	73	-39	-16	-105	49	61
134	68	138	192	67	31	-35	41	79	77
141	102	123	173	23	20	25	52	83	78

And of course the corresponding graphs can be looked at:



This gives a very interesting picture. Notice how the o55/2 and o34/3 averages are trending downward. This is a rich area for exploration.

I did a number of experiments where I measured point "profitability" versus different timeframes of Fibonacci snapshots. Here's one example, where I varied from 21/5 to 55/2 in various combinations in six different commodities, and then took a sum of each column:

	21/2	21/3	21/5	21/8	34/2	34/3	34/5	34/8	55/2	55/3	55/5	55/8
S & P	3179	4883	6221	5037	5741	9949	8125	7143	6415	9381	9009	9433
SUGAR	5019	5063	4553	4693	3989	4651	4689	4727	4987	5149	4913	4743
GOLD	4056	5444	6032	3520	4390	4224	3874	5036	3824	3886	3868	4278
COTTON	3872	5616	6938	6830	3256	4740	5718	5610	4486	5480	4736	4138
HOIL	11618	9998	7254	6352	9506	8220	5028	-112	10670	8352	6536	1552
BEANS	9000	6258	6260	5752	9694	5162	5184	4414	9292	5580	4092	2490
AVG	6124	6210	6210	5514	6096	6158	5136	4470	6612	6301	5676	4439

Then, among those averages, I averaged just those that involved 2, and then just those that involved 3 and so on. It looked like this:

AVG	6124	6210	6210	5514	6096	6158	5136	4470	6612	6301	5676	4439
					2	3	5	8				
					6277	6223	5674	4808				

Notice that those Fibonacci snapshots that included o2 were the most profitable, followed by those that included o3, and so on.

Different markets have different personalities in this way, and there's a rich vein there for those who care to look. Nevertheless, these and other studies eventually convinced me that, in general, OceanIndex snapshots should start with o1, and then sequentially include o2, o3, o4 and so on up to the reachback limit being measured.

Since this methodoloty includes all OceanIndexes up to the reachback limit, it also has the advantage of eliminating a source of arbitrariness that had crept in.

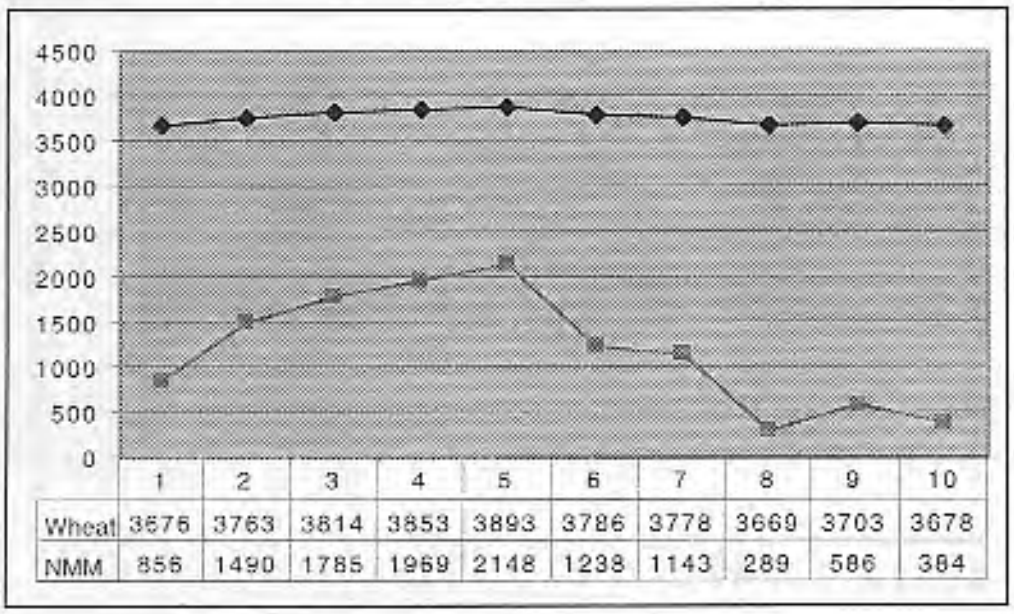
When this is done, it's as if each timeframe is being given its chance to give its input on the direction and thrust of the market, and adds to the emerging consensus, like bettors at a racetrack. The difference is that in this case the market itself is providing those bets.

When we average an inclusive sequence of OceanIndexes beginning with o1—the average of o1, o2, o3, o4, and so on—we've constructed what I call a Natural Market Mirror, or NMM. (How far the sequence should go on the upper end we'll get into later.)

Here's an example, again using wheat, beginning June 4, 1976:

760602	3713	8220	o1	NMM
760603	3724	8223		
760604	3676	8210	-1297	856
760607	3763	8233	2339	1490
760608	3814	8246	1346	1785
760609	3853	8257	1017	1969
760610	3893	8267	1033	2148
760611	3786	8239	-2787	1238
760614	3778	8237	-212	1143
760615	3669	8208	-2928	289
760616	3703	8217	922	586

In this example, we're using an NMM with a reachback of 40. That is, each day we're taking the 40 sequential **OceanIndexes** from o1 through o40 and averaging them to get our NMM index. When we chart that, it looks like this:



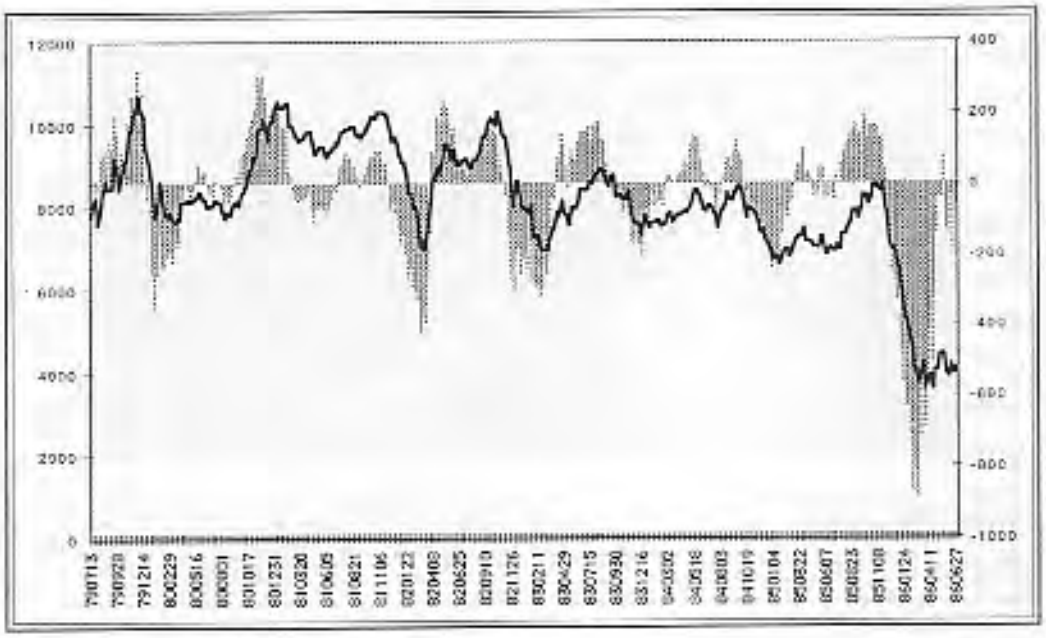
	1	2	3	4	5	6	7	8	9	10
Wheat	3676	3763	3814	3853	3893	3786	3778	3669	3703	3678
NMM	856	1490	1785	1969	2148	1238	1143	289	586	384

Notice that though wheat itself is holding at its former lows, the NMM has broken down through its low, and more importantly, its thrust has declined from a high of 2148 to a low in the 300-400 range. This market is in trouble!

Notice, too, that these NMM numbers could be directly compared in absolute terms with the NMM numbers occuring in any other market.

Like **OceanIndexes**, NMM numbers are always directly comparable across markets and across timeframes using different scales or timeunits. For example, NMM's computed across a timescale of minutes could be directly compared with NMM's using a timescale of weeks or months. This is also a rich motherlode for those willing to explore it.

Here's another example of an NMM chart, starting in July of 1979 in heating oil. The market is the black line and its scale is the left axis; NMM is the area chart behind it, and its scale is the right axis:



Notice how the upward thrust of the market is continually declining in absolute terms from the 300-400 area down to almost zero NMM as the chart progresses, before the final failed upthrust in NMM, which reaches its peak and begins declining dramatically just before the market itself fails and embarks on its breakdown.

NMM charts are a delight to analyze because they contain a wealth of information in concise form. In effect they are like the market's own internal analysis of itself. Moreover, that analysis is always in real time and doesn't lag as moving averages do.

In addition, NMM charts from different markets and timescales can always be compared not just in relative terms but in absolute terms. The positive/negative values of NMM represent the thrust of a given market at a given time and scale in apples-to-apples terms.

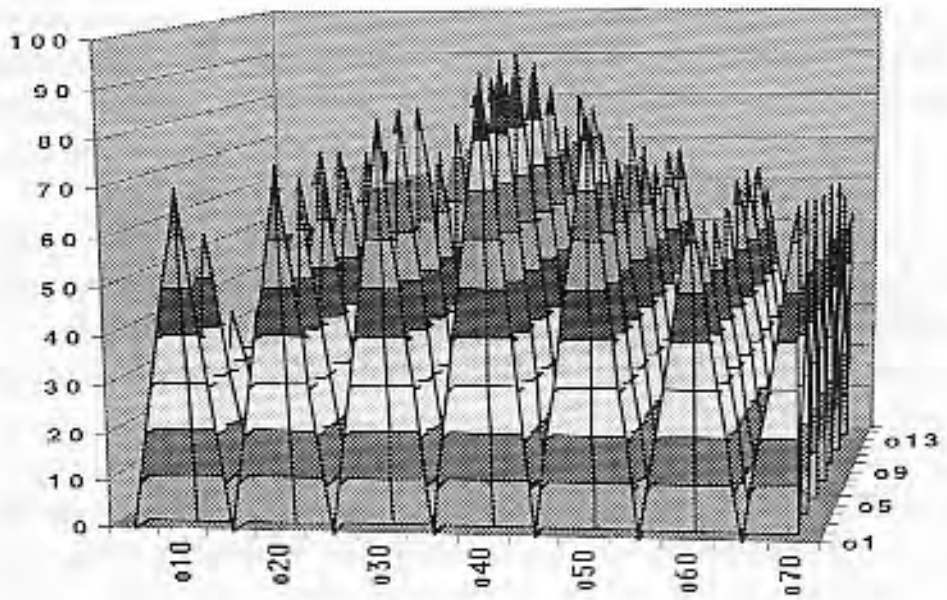
Many other interesting examples and analyses of NMM could be given, but I will leave that in the intrepid reader's capable hands. This is a very rich vein of ore for those who would like to strike out on their own.

The question that began to interest me at this point was:

Does NMM change as greater reachback lengths are added, and if so is there some ideal length of reachback data for NMM? And if that's true, is that ideal reachback length different for different markets?

I asked myself those questions, and to begin to answer them constructed a way of calculating comparable "profits" in points for different lookback lengths of NMM in different markets.

The results were quite striking. Here's an example:



This chart is measuring points of "profit," which is the vertical scale, among six commodities (sugar, gold, beans, S&P, cotton & heating oil) which have been averaged together. The different points of profit arise from using different begin- and end-points to calculate the NMM (we're allowing begin-points other than o1 for this experiment).

Over about 10 years the positive or negative NMM signals are used to generate buy or sell signals in that market, and the "profits" and "losses" are summed, and averaged with the same thing from the other commodities to give a single point of "profit" on this chart.

The numbers across the front row (o10 through o70) are the end-points, the lookback length, in constructing the NMM. The numbers running along the side (o1 to o13) are the begin-points in constructing an NMM. So for example, the "profit" peak on the chart corresponding to a begin-point of o3 and an end-point of o40 is an NMM constructed from the series o3, o4, o5 and so on up to o40.

Looking at this chart (opposite page), our question then is:

In constructing an NMM, what begin- and end-points generate the most profit, on average?

Let's look first at the begin-point (the **o1** to **o13** scale along the side). Notice how the profit peaks as they go from front to back begin to lessen. This helps to confirm our earlier conclusion that an NMM works best when it includes low **OceanIndexes** such as **o1**, **o2**, **o3**, etc., and that starting at higher numbers such as **o10** or **o15** is less efficacious. Starting from **o1** is also less arbitrary.

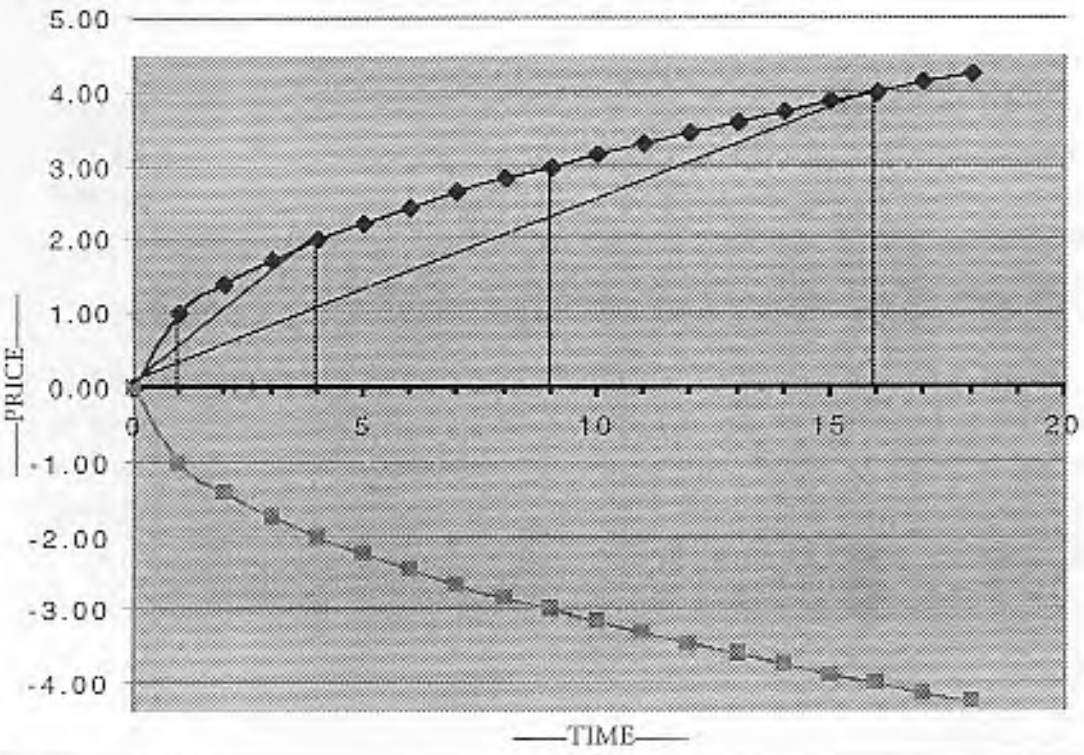
Now let's look at the end-point (the scale **o10** to **o70** running along the front). What we notice is that looking at this chart is like looking at a mountain ridge. The high "profit" ridge of the mountain runs from front to back at an end-point of **o40**, and falls off from the ridge on either side as the end-point of NMM decreases or increasess.

Of course we're introducing arbitrariness now by favoring one end-point over another, but we're only doing so in determining how much data to use. (And in more advanced theory, we look at how to remove this piece of arbitrariness.) This whole area is a motherlode for those who would like to look further.

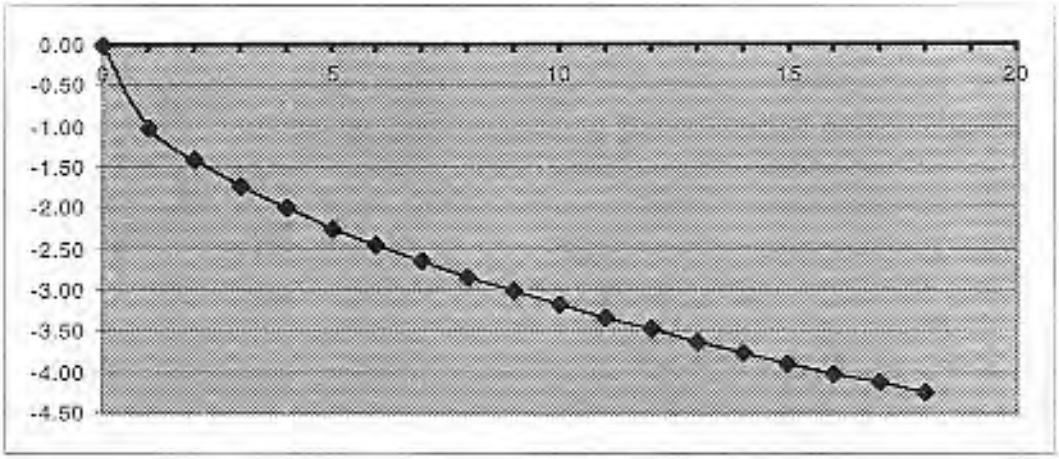
Now we'll explore the **Natural Market River**, or **NMR**.

6. *The Natural Market River*

The Natural Market River, or NMR, gradually took shape in my mind as I studied the chart below, taken from chapter 4:



I was looking for some sort of non-arbitrary curve that would fall away naturally as time went further out from the now moment. Something where the influence of each price point would be felt on the overall prediction of the next day's movement, and yet too where the influence of each price point would diminish naturally as it was further from the present. And my eye fell in particular on the bottom half of the $\Delta P = T^{0.5}$ curve, like so:



And I realized that the Y-axis difference on this curve of each successive one-day time interval was, of course, simply the difference of the square roots of their time intervals. That is, $(1^{0.5} - 0^{0.5})$, $(2^{0.5} - 1^{0.5})$, $(3^{0.5} - 2^{0.5})$, ... and so on. Notice that this sequence contains no constants anywhere; none have needed to be supplied.

What if now we let this natural sequence (which describes the basic underlying behavior of any market) modify the influence of the price at each time point (in determining the overall thrust of the market) as that time point extends farther back in time? We would have the NMR, and the equation would look like this:

$NMR = \Delta_1P_{100}\,(1^{0.5} - 0^{0.5}) + \Delta_1P_{99}\,(2^{0.5} - 1^{0.5}) + \Delta_1P_{98}\,(3^{0.5} - 2^{0.5}) + \Delta_1P_{97}\,(4^{0.5} - 3^{0.5}) + \Delta_1P_{96}\,(5^{0.5} - 4^{0.5}) + \ldots.$

What's astonishing to me is that the NMR and the NMM are not at all mathematically identical, and indeed are calculated in quite different (non-arbitrary) ways—and yet seem to agree about 80% of the time.

One of them (NMM) is averaging, in effect, each different timeframe's prediction for the next day's movement. The other (NMR) is looking at the naturally-declining influence on the present of each 1-day (or 1-unit) change as we go farther back in time. Different approaches. And yet they generally agree most (but not all) of the time. In our spreadsheet for wheat, we now need to move o1 (column D) up to the top of the spreadsheet so that NMR can reach back for it.

Date	Price	ln(P)	o1
760102	3393	8129	
760105	3521	8167	3703
760106	3491	8158	-856
760107	3580	8183	2517

Then rows 100 through 108, for example, would look like this:

					NMM	NMR
	760518	3539	8172	-1514		
	760519	3518	8166	-595		
→	760520	3493	8159	-713	-197	-1268
	760521	3488	8157	-143	-194	-727
	760524	3646	8201	4430	1083	3992
	760525	3550	8175	-2668	240	-1054
	760526	3590	8186	1120	554	1110
	760527	3631	8197	1136	844	1838
	760528	3621	8195	-276	706	714
	760601	3734	8225	3073	1534	3770
	760602	3713	8220	-564	1266	1265

It's worth noting that NMRs are also constructed in such a way that they can be directly compared with each other in absolute terms across various markets and timeframes, from corn to Cisco, from minutes to months.

Now we'll look at how the NMR can be incorporated into another aspect of Ocean:

7. The Natural Moving Average

Efforts to develop a natural moving average were in the background of my mind for a long time. It seemed to me that the simple concept of a moving average was the most powerful idea ever discovered in the search to analyze series of numbers. Here was something that could summarize, in the most powerful way, what was happening.

But the simple moving average had some powerful defects too. One, it weighed all its time points equally, without adjusting for nearness to the now moment. And second, an arbitrary constant gets introduced which radically determines what you see. A 10-day moving average of a market looks far different than a 200-day moving average.

A big improvement, in my opinion, was the EMA, or exponential moving average. I don't know who discovered it, but they did some fine work. The great insight of the exponential is that the *distance itself*

between the average and the price is always adjusted, in this case by the constant. To take a simple example, if the price moves to 100 and the EMA is at 90 and the constant is 0.1, then the new EMA becomes 91. The EMA moved 0.1 of the distance which separated it from the price.

In addition, if we analyze the EMA mathematically, we find that it gives price points more weight as they get closer to the now moment. The exact way in which it does this, of course, is determined by the constant you supply.

And there's the rub. Because once again we're introducing a constant which, depending on what we supply, radically alters the "window" through which we're looking at the market or number series.

To remedy this shortcoming, some fine work by Chande and others has been done to vary the constant based on the volatility of the market. I would now like to add modestly to these efforts.

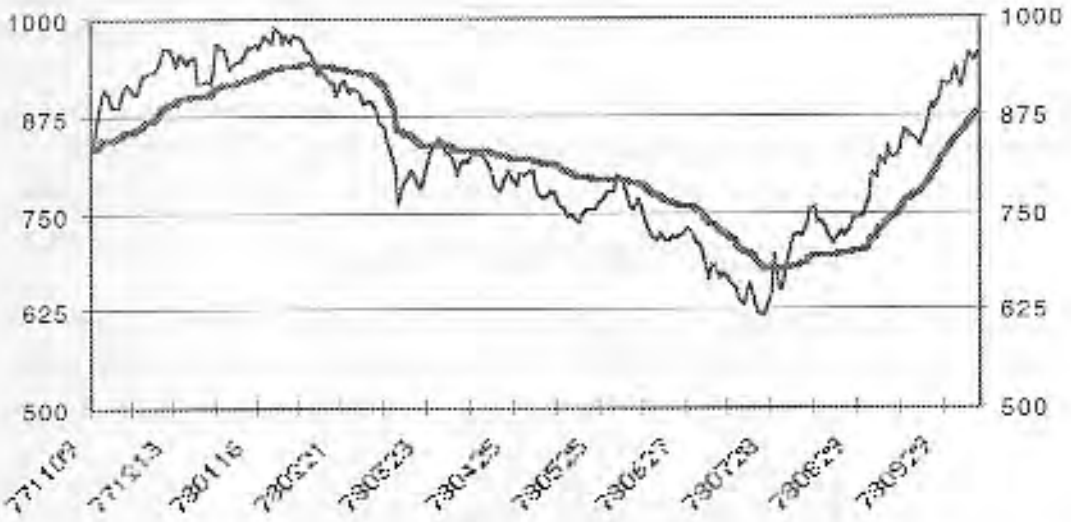
As always, I was looking for something where this adjustment for volatility would be non-arbitrary in that there would be no introduction of new constants. And where the adjustment for volatility would not be programmed in (if the volatility changes this much, change the constant that much), but rather where the volatility-adjustment would naturally arise somehow from the market itself.

In calculating the exponential constant, I used the absolute value of NMR for the numerator, which provides a natural falling-off in influence as the price moves farther from the now moment. The denominator became simply the sum of the (absolute value of the) o1s over the period of time in which data is supplied for calculating the NMR. If we supply 40 days (or units) of data to calculate the NMR, then we supply 40 days (or units) of o1s for the denominator.

The resulting ratio is then used as the constant in calculating an EMA in the normal way.

The denominator of that ratio is the sum of the absolute changes in the natural log of the price. The numerator is also those same changes, but naturally adjusted (by the differences in the square roots of time) for the falling away in influence as time goes away from the now moment.

The result, the **Natural Moving Average** or **NMA**, automatically adjusts for volatility without being programmed to do so, and without introducing any constants. It looks like this:



This example is from sugar again, which is the light line. The heavier line is the NMA. Notice how, perhaps a third of the way through the chart, the NMA abruptly halts its downward plunge and begins a more sideways move, just like turning a corner. Another interesting thing to notice is how, in general, the market when in a bearish mode stays below the NMA, and when it's in a bullish mode it stays above its NMA. And of course there are non-arbitrary ways to optimize that.

This particular chart uses 40 days of back data in its NMA, but could use more or less.

In constructing the NMA (using our example of wheat), we'll need to add a new column after o1, the absolute value of o1. Now the first five columns look like this, with the data beginning at row 3:

Date	Price	ln(P)	o1	abs(o1)
760102	3393	8129		
760105	3521	8167	3703	3703
760106	3491	8158	-856	856
760107	3580	8183	2517	2517

And NMM, NMR and NMA (starting at the sixth column), then look like this, with these indices beginning at the 100th row:

NMM	NMR	Ratio	NMA
-197	-1268	0.03	3493
-194	-727	0.02	3493
1083	3992	0.09	3507
240	-1054	0.02	3508
554	1110	0.03	3510
844	1838	0.04	3516
706	714	0.02	3518
1534	3770	0.09	3536
1266	1265	0.03	3541

The ratio here is broken out separately to show how it varies with time and the market. This is the constant that is then used in an exponential moving average to form the NMA. (The first value of NMA, row 100, is simply made equal to the market price at that moment.)

The graph of the NMA, starting at row 100, looks like this:

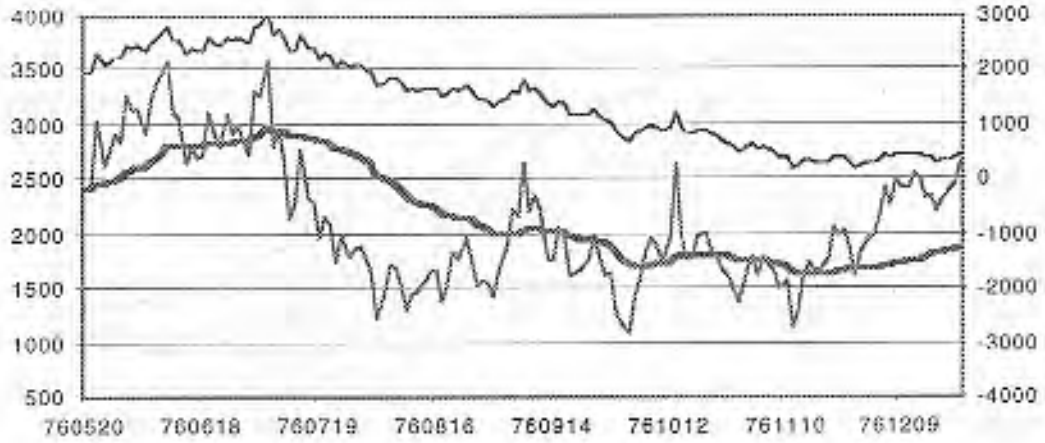


Here the wheat market is the light line, and NMA is the heavy line. Notice how the NMA jiggles around a bit, but keeps above the market quite nicely while it's descending, and vice-versa.

From here these tools can be optimized in a number of interesting ways. For instance, now that we have a Natural Moving Average, we can feed it NMM instead of price. Like this:

NMM	NMR	Ratio	NMAp	NMAm
-197	-1266	0.03	3493	-197
-194	-727	0.02	3493	-197
1083	3992	0.09	3507	-77
240	-1054	0.02	3508	-70
554	1110	0.03	3510	-54
844	1838	0.04	3516	-14
706	714	0.02	3518	-1
1534	3770	0.09	3536	131
1266	1265	0.03	3541	164

NMAp is an NMA using price data (the chart on the previous page). NMAm is an NMA using the NMM itself as its data. It looks like this:



The market, wheat, is the thin line at the top, scale left. The NMM is the thin line below that, scale right. And the NMAm is the darker line going through the NMM, scale right.

Notice how, in general, the NMM stays above zero when the market is going up and goes below zero and stays there when the market is going down. And of course the NMM can always be measured in absolute terms. In this case the downward thrust of the NMM goes repeatedly below -2000, indicating very strong breakdown energy in wheat.

But now, by adding a Natural Moving Average to the NMM, all sorts of refinements become possible. For instance, notice how, on the right side of the chart, the NMM crosses above its NMA, then comes down and "kisses" it before rising strongly above it again. This kiss of the NMA, followed by a strong rebound, is very indicative of where the marekt's inner organism is moving. And conversely.

An interesting variation is to apply the NMA to the NMR. Since the NMA is itself constructed from the NMR, we have the phenomenon of one indicator helping to fashion another which, in turn, then adjusts the modification of the first one.

The formula looks like this:

$$NMA_0 = [abs(NMR)/\Sigma abs(o1s)](NMR - NMA_{-1}) + NMA_{-1}$$

It's well to remember that, since the amount of data we supply to the calculations will affect what we see, there's still an element of arbitrariness to Ocean as it is presented here. It could be a fascinating journey for the intrepid reader to look into how to overcome that.

8. *The Zen Moment*

I have frequently run across the notion in traders that they should somehow be perfect, that if they were only good enough that they would never or rarely have a losing trade.

This is tragic nonsense. I have never known any trader who didn't have losses, and more to the point, I have never known a great trader who did not have plenty of losses.

One of the qualities that the great traders have is that they keep their losses small. This is not trivial. One of the greatest traders I ever knew said that it took him the entire first six months of his trading career, trading constantly every day, to learn just one thing—to get out of a losing trade quickly and automatically, keeping it small.

Conversely, I remember a famous afternoon when one of the fellow

traders in our group came to the absolute conviction that the market had to go up that afternoon, and he took a large position in support of this. The only problem was, the market started down and kept going down. All the way down, he said that the market had to turn around because his indicators told him so. Although we all implored him to get out of his position, he wouldn't and didn't, and lost $400,000 that afternoon, thus wiping himself out.

The market ultimately is not constrained by anything whatsoever. For instance, although it might have a strong tendency to have three impulse waves in an advance, it doesn't have to. Ultimately, the market can have 5 or 17 or 7 if it wants to. It doesn't have to "follow" any system, no matter how powerful that approach may have been in the past. It does not have to follow Wykoff principles, Gann angles, the sun and the moon or even the Ocean equation. The market may have strong tendencies to do these things, but it doesn't "have to" follow any system or go anywhere in particular or at any particular time.

This being so, the only thing we're ever really dealing with in markets is probabilities. We can determine, for instance, that the market has a greater probability to go up now than down over a certain timeframe. A very slight edge in truly determining this can have a huge impact.

Have you ever watched two lanes of traffic merging into one, or been part of that? There's a fascinating phenomenon that goes on. If two cars are both poised to go next, the one with the very slightest edge is the one that will almost always wind up going ahead. Observe it yourself the next time. The very slightest edge becomes the determining point.

Napoleon once said that in a battle, there comes a very slight moment when things could go either way, and the outcome of that small moment then becomes decisive to the direction of the whole.

Inexperienced traders sometimes talk about achieving 90% wins or something like that in their trades. I wonder on what planet that would take place.

In my observation, if one can truly obtain a very slight edge, even just in going from say 58% accurate to 62%, that edge can convey an actual consequence for a trader's career out of all proportion to that seemingly small expansion.

This is why, in my opinion, it is advantageous to develop at least partially your own approach to markets. The Advanced Ocean Software that is part of the Ocean Master program is designed to give you a set of tools with which to develop your own market innovations, should you wish to go in that direction.

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In my opinion, to accurately track this magnificent natural creature called the market, constantly twisting and turning, we must become a true follower of it rather than a predictor of it.

The great Zen masters were noted for following life rather than trying to fight their way upstream. They became adept at "listening" to life and letting it go where "it" wanted to go.

Indeed, many true stories exist of a conqueror advancing on a village in medieval Japan and a Zen master simply walking out the other side, leaving behind everything and whistling a tune as he walked. They were flexible, and not attached to what had existed before.

In the area of trading, the great traders are like that. They track rather than lead. They follow rather than predict. They have humility, and so they continually attempt to get in tune with what the market is actually doing as opposed to whatever it's supposed to be doing.

The preceding chapters have attempted to bring some interesting notions for understanding and exploration of markets to your attention. As stated earlier, however, this material is not intended to provide a comprehensive, tradable approach to markets. The latter is the province of Advanced Ocean theory and the Ocean Master program.

Now let's take one of the elements of Ocean Theory, the mirror-like reflectivity of markets across past and future, and see if we can benefit by extending it a little into other areas. Then we'll use our deeper understanding of this element to come back to markets.

9. The Law Of Reverse Effect - 1

As we've seen, the markets are always reflecting themselves. To use a metaphor, the market is continually radiating what I call "market waves" from its central Now moment out into both the past and the future. The Ocean Equation and the subsidiary equations that we've seen here are, in a sense, refinements of this fundamental dual nature that markets—and, as we're about to see, everything else—display.

I'd like to extend Ocean Theory a little beyond markets now, in a way that can potentially directly benefit your personal life. We'll begin by introducing what can be called the Law of Reverse Effect, a corallary of Ocean Theory's fundamental view that everything is mirrored.

To begin this story of dual effect, let's start with purely physical nature first, the basic foundation, and then go on from there. So let's look briefly at quantum physics:

In quantum physics, whenever an electron "pops" into reality from the vacuum, a positron (anti-electron) also pops into existence at the same time. It has to, because they come into being together, as a pair, because they can't come into existence otherwise.

A similar phenomenon occurs, for instance, with protons: When a proton pops into existence from the Void, it's accompanied by an anti-proton. Why? Because they aren't actually separate; they're actually just two halves of the same phenomenon.

At a slightly different level, we see this same duality in the alternation of day and night. Are day and night actually separate? No. They're just two faces of the same phenomenon, the rotation of the earth.

Summer and winter, to take another example, are also just two halves of the same phenomenon—the earth's journey around the sun while being tilted on its axis. "Summer" and "winter" are the names we give to the front and back face of that one phenomenon.

In the area of linquistics, we see the same thing. For instance, as soon as we've created the concept of "up," we've also created the concept of "down" at the same time, because the two parts only take on meaning in relation to each other.

The same, of course, occurs with "hot" and "cold," "left" and "right," "beauty" and "ugliness," "right" and "wrong," "light" and "darkness," and on and on. They all come into existence together. (If you'd like to explore this aspect of the topic further, please go to *www.mayyoubehappy.com*, click on the Search button at the left, and type in the word "duality.")

What I hadn't really appreciated before is how this universal duality extends into the dimension of time as well: That is, every negative event

is accompanied by an equal and positive event, and vice-versa, and that these two kinds of opposites are also two faces of one phenomenon.

My understanding in this area of time-duality greatly increased after a study of Natural Hygiene's concept of *primary effect* and *secondary effect* in relation to drugs and medicines.

What this brilliant movement, grounded in 19th century naturalism, says about drugs is this: The *primary effect* of every drug is the apparent one, the obvious one, the short-term one. But there's an equal effect, they say—*the secondary effect,* the long-term one, which not only takes place after the primary effect but is *the exact opposite of it.*

A few examples: We take a stimulant, such as caffeine or nicotine or cocaine or amphetamine or whatever, to get more energy. But where does the extra energy come from? It can only come from the living body; it can't come from a drug, which is lifeless and inert. Only the body can act.

In acting to neutralize the poisonous drug, the body is stimulated to produce more energy than it wants to in that moment. And the body obliges, producing the extra energy. But like double-entry accounting, an equal debit is now added to the ledger.

Because the body produced more energy than it wanted to during that time period, after the initial stimulation there follows a period of *less* energy while the body recuperates and restores its energy reserves.

If this process of "stimulation" continues, over time the body becomes more and more fatigued—the exact opposite of the effect that the stimulant is supposed to produce. The secondary or long-term effect of any repeated stimulant is gradual exhaustion.

We could also say that the first or primary effect is the myth; the opposite or secondary effect is what becomes the realtiy.

Another example is when we take alcohol or a narcotic or a tranquilizer or whatever to relax. The primary effect, the one that's initially noticeable, is indeed one of relaxation and calming. But the secondary effect, the one that comes later, is just the opposite—a period of greater anxiety and restlessness.

Continued over time, the heroin, barbiturate, tranquilizer, alcohol, etc. becomes more and more addictive and produces a state of underlying anxiety which can only be relieved temporarily by taking larger doses of the drug.

The intense anxiety which accompanies withdrawal of the heroin or barbiturate or whatever is simply revealing the true reality of what that individual has become—*more* anxious, the secondary effect.

Similarly, anti-depressants over time make one *more* depressed. Just ask the takers of anti-depressants, who eventually and inevitably get on a merry-go-round of searching for the "next" and "better" anti-depressant. The primary effect, the sense of feeling better, is eventually replaced by the long-term and secondary effect, that of feeling worse.

Similarly too, for instance, with cholesterol-lowering drugs. They bring down the *symptom,* high-cholesterol—that's the primary effect. But only addressing the underlying cause (a high-fat, high-cholesterol diet) will bring about a true healing process

If the underlying cause isn't addressed, the underlying disease of increasing arterial plaque will continue to worsen—that's the secondary effect, the reality of what is actually happening.

A final example in the drug area: We take antacid drugs to bring down heartburn, excess stomach acid. (In other words, we attack the symptom instead of altering our diet in a more natural direction, which would address the cause.) Interestingly, studies of antacid-takers show that over time the body actually *increases* its production of stomach acid—that's the secondary effect.

(For more info on primary-secondary as it relates to the body, please go to *mayoubehappy.com* and do a Search—button at left—on the words "primary secondary.")

So far, what we see is that the primary effect is the immediate one, the short-term one, the attention-getting one. The secondary effect is the later, longer-term, more permanent one, and it's the exact opposite of the primary effect. And of course, the secondary effect is always the *real* effect that is achieved.

What shall we call this general phenomenon? For want of a better name, I call it the *The Law Of Reverse Effect.* And now let's see how this beautiful principle might extend beyond drugs.

10. The Law Of Reverse Effect - 2

As *The Law Of Reverse Effect* extended itself (in my pondering) into the dimension of time, I began to see its connection to other events.

First, from the area of physics again, there was Newton's law that every action is followed by an equal and opposite reaction—a duality in time and the basic principle used to drive rockets.

To journey further into this mystery, I looked at the death of the dinosaurs. Some 65 million years ago a giant meteor struck earth, and the resulting dust-clouds blocked out the sun and severely chilled the planet for a time. According to archeologists, this wiped out at least 75% of the lifeforms that existed at that period.

If we were to go back and observe during that time, we would call it an unmitigated catastrophe. In theological terms, we could ask how God

could be so cruel as to allow three-fourth of all the life on earth to be wiped out.

Yet the extinction of the dinosaurs and other life had a very interesting secondary effect. Up until then the tiny mammals had occupied only a slight niche in the ecological space, because the space was filled by the dominant dinosaurs.

The death of the dinosaurs bestowed a great empty ecological space upon the mammals, allowing them to expand and flourish and multiply and develop. That, in turn, led to the rise of the primates and ultimately to us humans being here.

In short, we wouldn't be here but for the catastrophe of the extinction of the dinosaurs. That catastrophe was the primary effect, the short-term one. That you and I and other humans are here in existence—that's the secondary, longer-term effect.

In other words, the "bad" catastrophe allowed something to happen which we would probably label as a great "good," namely that the mammals and primates and humans flourished. Something "bad" led to and was followed by something "good."

Then I began to see that this principle exists everywhere and extends into everything.

For instance, when we fast to allow the body to rebalance itself, we often go through what are known as "healing crises," where our symptoms seem to get worse at first, whatever they might be. That's the primary effect—the immediate, short-term one.

But longer-term, as our body cleanses itself of toxins, we experience

much greater vitality and health—that's the secondary effect. (For more on this subject, go to the website and search on the word "fasting.")

The same thing happens at a slower pace, for instance, if we adopt a natural fruitarian diet. (Search on "fruitarian.") As our body experiences a more natural, cleaner-burning diet, it naturally begins throwing off accumulated toxins, which then circulate in the bloodstream until the body can eliminate them.

During this time our conditions or symptoms, whatever they may be, can seem to become worse—that's the primary effect. But on a fruitarian/raw-food diet, an extraordinary sense of well-being gradually begins to come over us—that's the long-term, secondary effect.

Notice that, at first, going more in a natural direction and letting nature do the healing seems to make things worse, but long-term they tend to get much better. Conversely, the more we take drugs to suppress our symptoms (the short-term fix), the worse the long-term underlying toxification and pollution of the body (which we call our "conditions" or "diseases") becomes.

This same principle would hold true if we humans wanted to facilitate the world in healing ecologically. At some point humans may choose to come back to nature when we see that otherwise life on earth, including ourselves, will go extinct. At that time we may drastically alter, in a more organic and natural direction, our ways of farming, our ways of eating, our ways of living together, our whole approach to the earth.

If this is done *en masse,* it's important to remember that the environment will seem to get worse at first as the earth neutralizes its built-up toxic load—the primary effect. (Meanwhile, the temptation will be to apply short-term fixes to obtain temporary relief.) But long-term,

through an organic process, the earth can heal itself ecologically this way—which would be the secondary effect.

The primary effect, the apparent one, is always the myth. That's the termporary effect that occurs when we treat the symptom instead of the cause. The secondary effect, the longer-term, more gradual one, is what becomes, more and more, the actual reality.

11. The Law Of Reverse Effect - 3

Now let's apply this *Law Of Reverse Effect* to a current world situation. For example, let's apply it to the current conflict (2002) between the Israelis and the Palestinians:

On the one side, the Palestinian people feel opporessed, subjugated, deprived of liberty and the means to economically sustain themselves. They have a deep anger against what they feel is a deep and continuing injustice. Militarily, they are faced with helicopters, infantry, tanks—the elements of a large and powerful army. The Palestinians are completely overmatched militarily. Where and how to direct this rage? The rage gets channeled into what Israel knows as "suicide bombers."

Palestinian suicide bombers want to inflict pain, bloodshed and fear on Israelis as a "payback" for the pain and suffering that their own people have endured and are enduring. And they achieve this: The Israeli people

do experience pain and suffering and fear. So this is the temporary result, the primary effect.

Meanwhile, the longer-term effect of the suicide missions is to increase the feeling of insecurity among the Israeli population in general—and thus to increase the power of right-wing elements in Israeli society and government. This in turn leads to more military solutions and thus more pain, bloodshed and fear among—you guessed it—the *Palestinian* people. And that's the secondary effect.

On the other side, the Israeli people are experiencing a great deal of fear and insecurity. The little strip of land called "Israel" has only been carved out in the last few decades and feels extremely tenuous. Israelis feel besieged by angry neighbors who, they feel, want them to disappear. Only they're not going to. One thing they learned from the Holocaust was to stand up for themselves.

In consequence of all this, Israel has a big army and a large right-wing element and a feeling that no-one is going to be allowed to push Israel around or tell it what to do. Least of all terrorists. So it clamps down on the Palestinian territories in order to control this horrible terrorism. And the effect is achieved: Military clampdowns do indeed cause terrorism to be temporarily reduced. This is the primary effect.

Meanwhile, the more-gradual, less-obvious effect is to greatly increase the long-term despair and rage and lack of hope among the Palestinian people. This in turn fuels a desire among its more extreme elements to lash out at their oppressors in any way possible. A desire grows among the young to die for one's country. And military planners, outmatched completely in men and weaponry, turn to suicide bombing as a way to strike. All of this tends to *increase,* long-term, the number and degree of suicide bombings in Israel.

This is the secondary effect. The very thing that Israel does to decrease terrorism and increase its security acts to increase terrorism and decrease security. Whether you are pro-Israel or pro-Palestinian in this conflict, it is not difficult to see the mutual devastation of both peoples and both economies in this mutually destructive conflict.

That is, each side achieves the exact opposite effect of what it intends. This is the Law of Reverse Effect in action. *To make use of this law in a positive direction, we have to begin by understanding the other side and why it is feeling so fearful and pained.*

This also applies, of course, to those interior parts of ourselves that we reject, push away, "make war on." If we can welcome these parts of ourselves when they appear in consciousness instead of pushing them away, a positive cycle can begin. But this welcoming is not the same as buying-in to their message: We can love that they're there, like the melody of a beautiful bird, without at all needing to buy-in to what they're saying. (For more information on this aspect of our subject, please go to the *mayyoubehappy.com* website and click on the "Reality" button at left.)

This very wide-ranging Law Of Reverse Effect applies to every area I've looked at so far. As a last, different example, let's take finance.

In the up-cycle of human financial affairs, more and more money (credit, that is, debt) is created. The percentage of debt in the society increases among individuals, corporations, municipalities, states and national governments. This is what we see now.

This increasing credit bubble creates an effect, for awhile, of greater prosperity and financial well-being—that's the primary effect. With minor set-backs, that's basically what we've seen since the Great Depression of the 1930's.

The secondary effect comes when the debt/credit bubble collapses, as it inevitably must sooner or later. Eventually every debt/credit bubble in history has collapsed upon itself, as the increasing debt soonor or later exhausts the ability to service it.

When this happens, a financial recession or depression occurs—that's the secondary effect. This secondary effect follows the primary effect as surely as night follows day. And yet, like all "negative" events, this painful contraction serves a beneficial purpose, in that it wrings out distortions and excesses and creates a solid base for the next great movement upward in human events.

12. The Law Of Reverse Effect - 4

Now let's come back and apply our knowledge of the Law Of Reverse Effect to the situation of trading in markets:

In markets, longs push up markets by their buying, and shorts push down markets by their selling. This is the Primary Effect, the immediate and obvious one.

The Secondary Effect, the more lasting one, is exactly the opposite. That is, it is the longs who ultimately drive down markets, and it's the sellers and shorts who ultimately drive them up.

When sentiment has gotten very bullish about the prospects for some market, the long positions build up over time. At the moment when everyone who's bullish has taken their position, there's no buying pressure left; everyone's just waiting for the market to go up. Thus the slightest

selling pressure is able to drive it down. *And as the market starts down, it is the longs who propel it down further,* as they gradually and then more and more are forced to change their mind and sell.

Conversely, when sentiment has gotten very bearish about the prospects for some market, outright selling occurs. As well, short positions build up over time. At the moment when everyone who's bearish has either sold or taken their short position, there's no selling pressure left; everyone's just waiting for the market to go down. Thus the slightest buying pressure is able to drive it up. *And as the market starts upward, it is the sellers (getting back in) and the shorts (getting out) who drive the market up further,* as they gradually and then more and more are forced to change their mind and buy.

This is the Secondary Effect, of the Law Of Reverse Effect, in action.

A knowledge of this paradoxical principal—that longs drive Bear Markets and sellers/shorts drive Bull Markets—is very helpful in understanding the hidden signals of markets. Markets are best understood as *psychological animals* composed of crowds, whose recurrent emotional excitements, in all time-frames, leave signals in the price.

These emotional signals can be deciphered, but not with the usual tools. There was a time when a trader could draw some trend lines on a chart and some support and resistance lines and they would work like crazy because almost nobody knew about them. This was back in the late 19th century. They still have some value today, but the difference is that millions of traders are looking at them now.

There was a time when you could look at flags, rates-of-change, MACD, ADX, etc., etc. and they would be clean and relatively fake-out free. No longer. The markets have wized up to those things and many

others. The usual and known indicators, even in complex forms, are anticipated now and thus much less amenable to profit. You may have to take some time to find this out for yourself.

Markets are different mechanisms from most other phenomena in life. If the sun was about 93 million miles from earth in the 19th century, it's still about the same distance in the 21st. We can still draw upon that knowledge. But in markets, the knowledge that was useful yesterday won't work today, precisely because millions of market participants are aware of it and attempting to use it for the same purpose.

Modern-day markets have changed. As millions of traders have gotten access to the information, indicators and signals that used to be confined to the few, markets have taken on a more paradoxical tone. The pattern that previously signaled *this* kind of move is now more likely to precede *an opposite* kind of move instead.

This opposite and Secondary Effect, whose signals are more hidden, must be detected and used in order to navigate successfully in modern-day markets.

The parts of Ocean Theory that you've learned in this book can make a good initial foundation for your further investigations, if you wish, in this direction. Because the Ocean indicators are much more natural and less arbitrary, they form a better foundation for software that detects the natural and subtle signals of the Secondary Effect that is the key to the more sophisticated and paradoxical moves of modern-day markets.

13. The Law Of Reverse Effect - 5

The twin subjects of money-management and risk-management are critical ones for the successful trader. Without at least a preliminary understanding of how much equity to risk on each trade, it is virtually impossible to consistently prevail in markets.

It's often thought by traders that increasing their position-size will increase their ability to make the "big killing" in the market that will constitute success. This potential for the "big killing" in a large position is the Primary Effecct. The Secondary Effect, which of course shows up at the same time, is the potential for the "big wipe-out."

It has been my observation that traders generally wipe themselves out because of their attempts to get large monetary increases quickly. I have never known a trader who went out of business because of a series of small losses; it is always one or more catastrophic losses that do it. Catastrophic

losses, in turn, almost always result from the attempt to make the "big killing" by trading with position-sizes that are too large relative to the size of the equity in the account.

Most traders I know who have been successful in markets have done so after giving up the chase after the "big killing" and thus also given up the potential Secondary Effect of the "big wipe-out."

It is the sign of an immature trader that he or she is primarily focused on potential profits. It is the sign of a mature trader, in contrast, that he or she tends to focus on potential losses. The Law of Reverse Effect says that if we use large position-sizes, relative to our equity, in order to secure large trading profits that we'll most likely wind up with the Secondary Effect instead—of sustaining large losses.

Paradoxically, if you want to increase your trading profits *it is wise, according to Ocean Theory, to drastically lower your position-size and overall margin commitment* as a percentage of your account.

Thus, in terms of risk-management/money-management, at the level of this book I'd like to offer the following general guideline to you:

In general, use position-sizes and an overall commitment small enough that you sleep well. No more than 4-5% of equity per position is good.

It's common to see ads touting 90% accuracy in trading. In reality, if you can achieve 60% trading accuracy you will have a tremendous edge and will do extremely well *if you have good money management.*

It can be shown mathematically through information theory that if you can achieve a 60% accuracy rate that your best "betting" strategy is to use, in total, 20% of your trading equity. This is recommended.

14. A Peek at Advanced Ocean

In Advanced Ocean Theory, embodied in Advanced Ocean Software, the indicators you've already learned are combined with others not presented here to form multiplexed indicators of unique power.

The surest way to ruin as a trader, aside from using too much margin, is to attempt to pick tops and bottoms in markets. It is far wiser to let a strong trend establish itself *and then get on at retracements.*

But the $64,000 question is: How can we tell that the retracement is ending? This is an example of where Advanced Ocean shines.

For instance, one indicator that is a favorite of Ocean Masters is called NMC. When the NMC falls to zero—has a "zero hit"—that indicates, with a high degree of probability, that the retracement has ended. Then, when the NMC "bounces away" from zero, it's a good time to enter.

To see a preview of some charts of Advanced Ocean in action, go to the website *www.mayyoubehappy.com,* click on the button at left called *Ocean,* then click *Ocean website (*which will take you to a preview of our new Ocean website), and then click on *The Software.*

15. Oneness In Duality

The two opposites in life always come as a package, the primary and secondary effect, equal and opposite, like Newton's Third Law of Motion. Every "catastrophe" or "bad" event also eventually brings about a great good. And conversely, every "good" event also brings about something we would label "bad." They always go together because it's the very nature of existence to always balance itself.

Everything in the universe is matched by its opposite and always has been. In the dimension of time, the primary effect (the myth) is always followed by the secondary effect (the reality).

When we truly see this, and perceive the inherent pairing of all things, we naturally surrender more to the flow of existence, to contributing our part without obsessing about what the ultimate outcome will be.

We see that what we call "bad" actually makes possible what we call "good," that the two always come as a package, and that the one can't exist without the other. We see that existence itself can't exist except as what we think of as these dualities, but which are really just different manifestations of the same phenomenon, the same energy, the one—the great mystery that loves without exception all parts of itself, the ineffable light that includes both light and darkness.

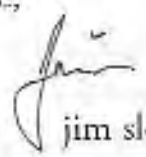
Perceiving this, we naturally let go, like a closed fist relaxing, of our resistance: our resistance to the way things are, to the way we ourselves are, to the way other people are, to the way the world is. And our actions, including those actions intended to serve life, occur within that larger and more relaxed context.

Then we do our part, whatever that may be, in great humility and compassion and surrender, as we see that our actions arise by themselves and that, in any event, "we" aren't doing it. Paradoxically, that surrender of control is the very thing that tends to lead, by Ocean principles, to the effects of greater harmony, effectiveness and alignment in our actions.

This is an exquisite and beautiful existence, subtle and balanced in its divine perfection, always being however it is supposed to be, always going by definition wherever It is supposed to go.

May you have a fascinating and compassionate journey.

Much love,



jim sloman